Shapes

BOX IT OR BAG IT MATHEMATICS

Practice & Enrichment Boxes

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Box It or Bag It Mathematics, Practice & Enrichment Box: Shapes

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- Teachers Resource Guide and Blackline Masters, 1st and 2nd Grade
- Practice & Enrichment Boxes:
  - Shapes
  - Introduction to Measuring
  - Understanding Measuring
  - Reading, Writing & Understanding Numerals 0–10
  - Pattern
  - Arithmetic
  - Money
  - Place Value Counting
  - Place Value Addition & Subtraction

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Getting Started

Once you've introduced Shapes through a variety of group lessons (be sure to see Box It or Bag It Mathematics Teachers Resource Guide, Kindergarten, *SHAPES), you will want children to practice and extend their understanding using the activities that follow in this packet. Here are a few things we've found helpful to remember for a successful Independent Practice Time.*

Each Box is designed to be used by 1–6 children. Provide no more than 8–12 boxed activities at one time for a class of 30. Too many activities create more than tolerable chaos.

Model each activity thoroughly until children can tell you what to do, step by step. You'll find "box ingredients" and "playing instructions" for each activity in this packet. We use clear contact paper to attach them inside our box lids so WE can remember what goes in each box and how each game is played. Reading the directions would be too difficult for most primary children.

Resist the temptation to put out all your challenging Boxes at once—provide an equal balance of easy and hard. (If you set out too many difficult Boxes, all the children will need you at once and the noise level will be almost unbearable as your children try to cope with the stress of too many difficult tasks.)

As you construct these Practice and Enrichment Boxes, cover your box tops with the same design contact paper. That way, you'll be able to pull your Arithmetic Boxes off the shelf easily, even if they've gotten mixed in with other boxes. (Boxes can be ordered from The Math Learning Center in three sizes: standard (9" X 12" X 2"), half size (9" X 6" X 1-7/8") and junk (4" X 7" X 1-1/8".) See the Box It or Bag It Mathematics Teachers Resource Guide, *MATERIALS INDEX, for additional ordering and making information.*

Remember the Boxes themselves can be used for group instruction. They are ideal for use by an aide or parent with small groups. Some of them can be easily adapted for use with your whole group.

During Independent Practice Time, it's critical that you be available and in circulation to make sure things go smoothly. Once routines even out, you'll have opportunities to observe individuals which are not afforded when you conduct group instruction. You can really spot children with problems or understandings beyond your predictions. See the next page for some Observation guidelines.

Be sure to see the Box It or Bag It Mathematics Teachers Resource Guide, *INTRODUCTION, for more implementation strategies.*

Shapes Observation Sheet

														Children's Names
														Works well with others, shares materials.
														Gets to work easily.
														Recognizes shapes and points to them when named.
														Names shapes.
														Creates shape designs, patterns and pictures
														Locates shapes in environment.
														Sorts shapes.
														Can draw simple shapes.

General Making Instructions

Many of the Boxes have similar game parts. Rather than repeat the making instructions for these every time, we've included them in this section. Many of the gameboards, spinner tops, and cards have been printed for you and are among the blacklines and cardstock included in this packet. We'll always indicate if game materials are in the packet.

SPINNERS

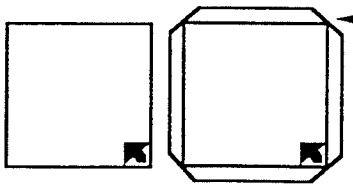
For each spinner you'll need:
- spinner top from blacklines
- two 6 X 6 squares poster or matte board, white or any light color
- one or two 1 X 1 squares poster or matte board (scraps work just as well as 1" squares and save a great deal of board)
- one regular-sized paper clip
- filament (strapping) tape
- clear contact paper

To Do:

1. Glue printed spinner top to one of the 6 X 6 pieces of posterboard. Cut it out. (Many teachers have found that matte board is sturdier and lasts longer. Also, rather than cutting out a 6" square for the spinner top, a great deal of board can be saved by gluing all the spinner tops to a large piece of board and then cutting them out. (If you mass produce spinner tops, jot the name of each game by its spinner top so you can remember where it will go.)

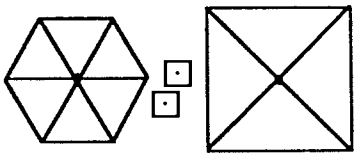
Snip the edges of the contact paper so you can fold it under.

2. Cut a piece of clear contact paper somewhat larger than the spinner top. Place the contact paper over the top. Snip the edges of the contact paper and turn them under the spinner top.



Clip contact paper at the corner so you can fold it under

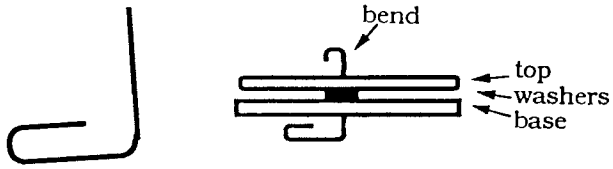
3. Draw a small arrow at the corner of the other 6 X 6 piece of railroad board. Cover the square with clear contact paper, turning the edges under.



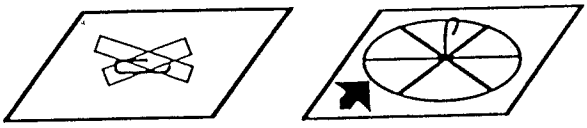
Draw lines diagonally across the back of the 6 X 6 square to locate midpoint

4. To assemble spinner, poke holes through the center of the 6 X 6 square, the 1 X 1 "washer" pieces, and the center of the spinner top.

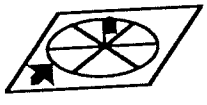
5. Unfold a paper clip by pulling out the middle section and bending it upwards.



6. Poke it upward through the squares, the washers, and the spinner top.



7. Tape the paper clip with an "X" of filament tape to the back of the 6 X 6 square to hold the spinner together. Bend down the top point of the paper clip in front and wrap it with a small piece of filament tape to prevent injury. Be sure to label each spinner with the name of the game. Otherwise, cleanup can be challenging.



Games and Activities

Shapes Floor Graph (3–6 Children)

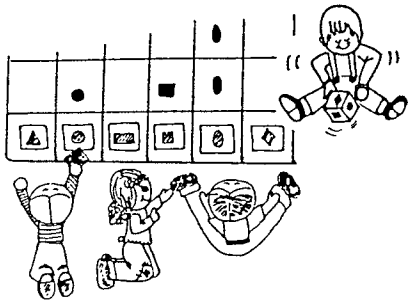
See Box It or Bag It Mathematics Kindergarten Teachers Resource Guide, CHAPTER 15, Shapes Floor Graph, for group introduction to this box.

Box ingredients→ vinyl graph

shapes die

shapes packets (6)

standard box for storage



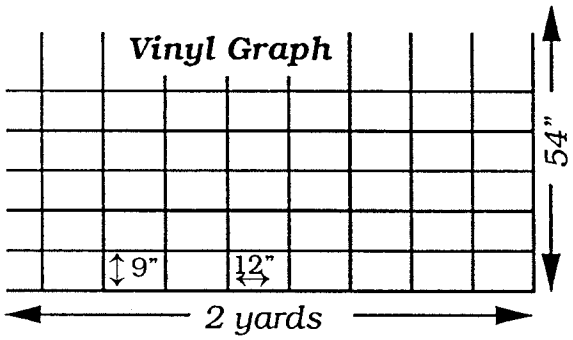
PLAYING INSTRUCTIONS

1. Children sit at the foot of each column of the vinyl graph. (A child may play more than one column if there are not six players.) Children lay their empty packets of shapes at the bottom of their columns and hold their shapes.
2. The "leader" rolls the die. Everyone calls out the shape rolled.
3. The child holding that shape places one in the bottom box of his or her column.
4. Play continues until one column is filled. Be sure to count shapes in all columns. Which is most and least? Are there more triangles or circles, etc.

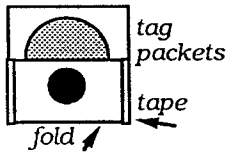
Note to Teachers: The wonderful part of this activity is that children help one another so much. It's an excellent game to use as you first begin studying shapes.

MAKING INSTRUCTIONS

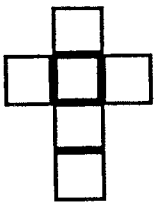
Vinyl Graph
Purchase two yards of 54"-wide, solid color vinyl. Section off the vinyl with a permanent marking pen. There will be six columns, each 12" wide. The boxes will be 9 X 12 in each column.



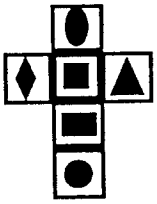
Shapes Packets (6)
Locate pattern sheet for Shapes Floor Graph in blacklines. Cut six of each different shape from railroad board or sturdy cardboard. Put each set in a tag board packet labeled with its shape.



Shapes Die
Cut six 2" square pieces of sturdy cardboard or railroad board. Construct the die as illustrated below.



1. Tape it together as shown.



2. Draw shapes on each surface. 3. Cover with clear contact paper. Trim extra edges.

4. Fold up to form cube. 5. Tape edges.

Store die, shapes packets and vinyl graph in a standard box.

Feely Box Shapes (2–4 Children)

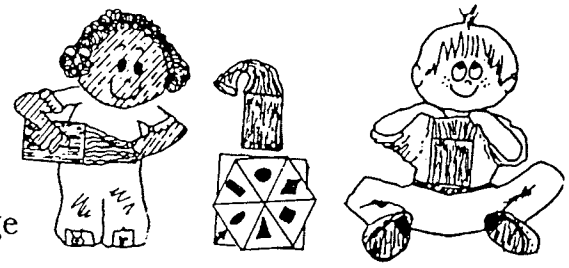
See Box It or Bag It Mathematics Kindergarten Teachers Resource Guide, CHAPTER 15, Feely Boxes, for group introduction to this box.

Box ingredients→ feely boxes (4)

shape cut-outs (4 sets)

spinners (3)

standard box for storage



PLAYING INSTRUCTIONS

1. Choose which spinner you will use. Take the feely boxes and check to be sure they have the needed shapes inside.
2. Take turns to spin the spinner.
3. Find the shape in your sock box (don't peek!) by feeling for it. Keep it hidden in your hand until every player is ready to show it. It's wonderful when every player finds the shape!
4. Play continues as long as children are interested.

MAKING INSTRUCTIONS

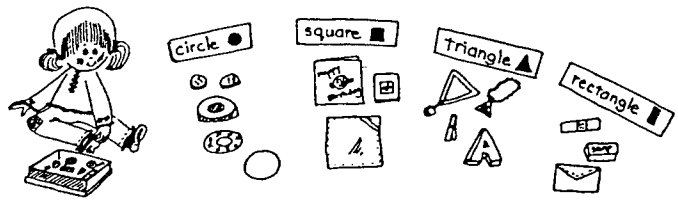
Feely Boxes (4)
Save cat food cans or tuna cans. Wash thoroughly. Leave the bottoms in and, with a hammer or pliers, smooth down any sharp or rough edges at the top. Purchase two pair of children's very stretchy socks. Slip each can into a sock. Presto—feely boxes!

Shape Cut-outs (4 sets)
Use the patterns from the Feely Box Shapes blackline to help you cut out shapes from sturdy cardboard. You'll need four of each shape.

Spinners (3)
Locate Feely Box Shapes spinner tops in blacklines. Assemble as directed in General Making Instructions. Store spinners, shape cut-outs and feely boxes in a standard box.

Shapes Sorting (1-2 Children)

Box ingredients→ sorting items
sorting cards (4)
half box for storage



PLAYING INSTRUCTIONS

1. Set out sorting cards.
2. Study each sorting item and put it in the group where you think it fits.
3. When you are finished, show an adult your work.

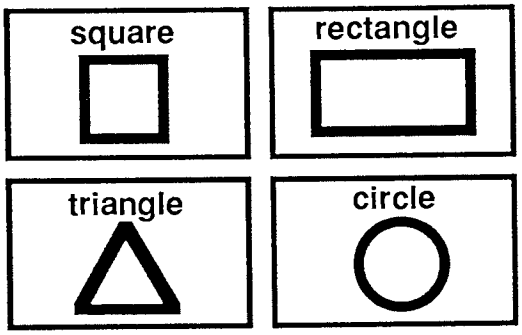
MAKING INSTRUCTIONS

Sorting Items
Go through your drawers, closets and cupboards and gather two- and three-dimensional items such as—

Rectangles: bar of soap, eraser, small box, birthday cards, letter, book, etc.
Triangles: old jewelry, swimming pool tile pieces, buttons, etc.
Circles: button, washer, large head screw, jingle bell, trim ball, seeds, lids, margarine tub, saucer, etc.
Squares: block, unifix cube, die, photo slide, book, etc.

Sorting Cards (4)
Use 3 X 8 strips of tag to make cards. Laminate or cover cards with clear Contact. Store cards and sorting items in a half box.

Note: Children could bring things from home to enhance the sorting collection.



Shapes Lotto (1-2 Children)

Box ingredients→ lotto boards (4)
leader cards (16)
game markers (80)
standard box for storage

PLAYING INSTRUCTIONS

1. Leader holds up shape card.
2. All players say color and name of shape, i.e., "red circle".
3. Each child locates the shape on his/her lotto board and covers it with a black square.
4. The first child with four in a row wins.

MAKING INSTRUCTIONS

Lotto Boards (4) and Leader Cards (16)
Locate Shapes Lotto boards in the cardstock portion of this packet. The Leader Cards are printed, also, on these sheets. Color in the shapes. Have *all* circles be one color, etc., on every board. Color the leader cards in the same colors as you've chosen for the boards. Cut apart the leader cards.

Game Markers (80)
Clear plastic round game markers (available from The Math Learning Center) are ideal but any small counters will do. Store in a junk box. Store boxed game markers, leader cards, and lotto boards in standard box.

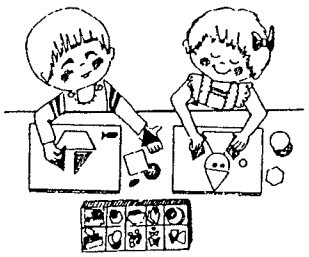
Felt Shapes (1-2 Children)

See Box It or Bag It Mathematics Kindergarten Teachers Resource Guide, CHAPTER 15, Felt Shapes, for group introduction to this box.

Box ingredients→ cut felt shapes

flannel boards (2)

standard box for storage



PLAYING INSTRUCTIONS

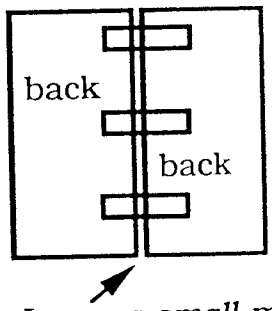
Children create designs, patterns, etc., on flannel boards.

Note to teachers: Don't be shocked when the children, day after day, seem to do nothing more than cover every inch of the flannel board with a hodgepodge of shapes. Eventually when this has run its course, they do wonderfully creative things. Apparently, the hodgepodge approach is a must.

MAKING INSTRUCTIONS

Cut Felt Shapes
Purchase ten colored squares of felt. Use the Felt Shapes patterns in blacklines to cut a wide variety of colored shapes from your felt.

Flannel Boards (2)
Cut four 6 X 11-1/2 pieces of sturdy cardboard. Cover each piece with dark solid-colored flannel (1/3 yard of flannel will be more than adequate). Dab edges with glue. Tape all edges firmly with filament tape. Hinge boards at the back with several pieces of filament tape to create two folding flannel boards. Store boards and cut felt shapes in standard box.



Leave a small margin so board will fold easily

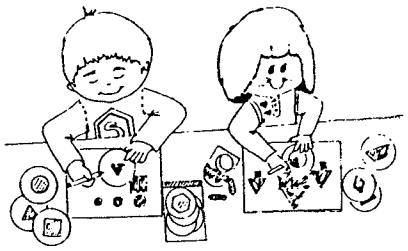
Shape Templates (1–4 Children)

Box ingredients→ templates (15-20)

pencils

paper

standard box for storage



PLAYING INSTRUCTIONS

Children use templates, pencils and paper to copy shapes, create designs or patterns, and even realistic pictures. Be sure to make crayons available, too.

MAKING INSTRUCTIONS

Templates (15-20)
Save clear lids from margarine tubs and other small plastic containers. Trim the rims off so you're left with clear plastic circles. Each lid will be the template for one shape, so the more lids you can gather and cut, the more interesting this activity will be. Locate the Shape Templates pattern page in the blacklines, and cut it apart. Tape each shape to a lid and cut it out with a single edge razor blade, an Exacto knife or very sharp scissors. (Curved shapes have to be cut with scissors.) Store templates, pencils, and paper in a standard box.

Shapes Mat (2–4 Children)

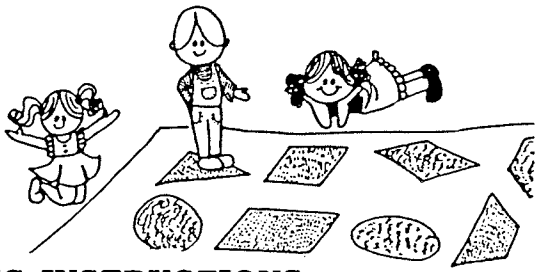
See Box It or Bag It Mathematics Kindergarten Teachers Resource Guide, CHAPTER 15, The Shapes Mat, for group introduction to this box.

Box ingredients→ shapes mat

memory cards (3 sets)

spinner

standard box for storage



PLAYING INSTRUCTIONS

Spinner Variation

1. Children sit around outside edges of mat.
2. Child who will jump on shapes has shoes off (socks on).
3. Leader spins the spinner; all children call out color and shape name, "blue square", and jumper jumps to appropriate spot. (Don't let this be a testing time. Everyone helps—everyone learns!) Continue with each jumper for four or five turns.

Memory Cards Variation

1. Children stand around outside edges of mat.
2. One child is eagerly waiting turn in stocking feet at end of mat.
3. Leader holds up memory card. (There are two-shapes, three-shapes, and four-shapes memory cards. Hold up cards of appropriate difficulty for each jumper.)
4. Jumper *plans* how and where to jump as group reads card aloud, "red circle, blue square, orange triangle". Once he/she begins to jump, encourage smooth rhythmic movements. The goal here is to help children plan more than one move as well as recognize shapes and colors.
5. Each child jumps one memory card and returns to edge of the mat. The pace here is quick and fun!

MAKING INSTRUCTIONS

Shapes Mat

You'll need 1-1/2 yards of dark cotton blend fabric, 8 squares of felt or fake fur in assorted colors, and Shapes Mat patterns from blacklines. Pre-wash cotton fabric. Cut out felt or fur shapes using patterns. Arrange the cut shapes on background fabric so they are comfortable jumping distances apart. Sew or glue each shape to the backing.

Memory Cards (3 sets)

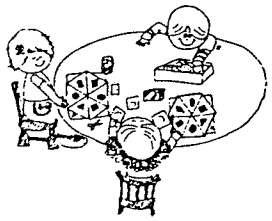
Locate the three sets of Shapes Mat memory cards in the cardstock portion of this packet. Color the shapes to match your mat. Laminate or Contact. Punch hole in upper corner and put each set on a binder ring.

Spinner

Locate Shapes Mat spinner top in blacklines. Assemble as directed in General Making Instructions, but use an 8-1/2" square of sturdy cardboard for a base and a 2" square "washer". Store the spinner and memory cards in a standard box. You may need to store the mat separately—it's fairly bulky.

Shapes, Spinners and Scissors (1–4 Children)

Box ingredients→ spinners (2)
scissors (4 pairs)
shapes to cut
envelopes
standard box for storage



PLAYING INSTRUCTIONS

1. Spin the shapes spinner. Look through the box of shapes to find the shape you need.
2. Cut out the shape and put it into your envelope.
3. Spin and cut until your envelope has lots of shapes.
4. Compare your shapes with your friends.
5. Clean up your paper scraps.

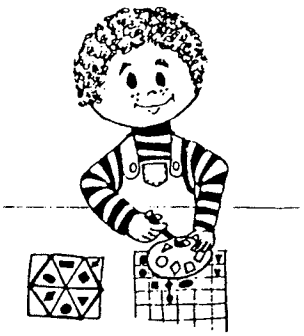
MAKING INSTRUCTIONS

Spinners (2)
Locate the Shapes, Spinners and Scissors spinner tops in blacklines. Assemble as directed in General Making Instructions.

Shapes to Cut
Locate the Shapes, Spinners and Scissors shapes sheet in the blacklines. Make a thermofax and then run dittoed copies on pastel construction paper. Cut shapes apart on section lines and place in box. (Children will be looking through a boxful of multiple shapes to find the single shape they need.) Store shapes to cut, spinners, scissors and envelopes in a standard box.

Templates and Spinners (1–4 Children)

Box ingredients→ spinners (2)
record sheets
templates (4)
pencils
standard box for storage



PLAYING INSTRUCTIONS

1. Spin the spinner. Be sure you take turns with the spinner.
2. Draw the spun shape on your graph using your template.
3. Keep spinning and drawing until one shape column is filled.
4. Compare it with your other columns. If you do another paper, do you think that shape will win again? Try it!
5. If you do more than one paper, staple your pages into a book.
6. Show your finished work to your friends and a grown-up.

MAKING INSTRUCTIONS

Spinners (2)
Locate the Templates and Spinners spinner tops in blacklines. Assemble as directed in General Making Instructions.

Record Sheets
Locate Templates and Spinners record sheet in blacklines. Run copies.

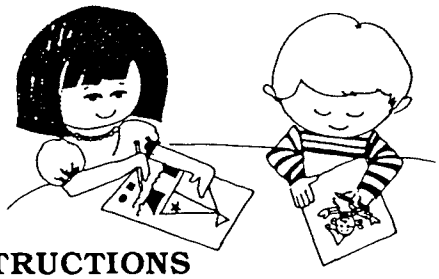
Templates (4)
Gather four Cool Whip plastic lids (or any large smooth clear plastic lids). Trim the rims off so you're left with flat, clear plastic circles. Tape shape drawings (in blacklines with spinner tops) on lid. Cut out shapes with a single edge razor blade or an Exacto knife. (Curved shapes need to be cut with very sharp scissors.) Store tem-plates, record sheets, spinners and pencils in a standard box.

What's Missing? (1–4 Children)

Box ingredients→ black Vis-a-Vis or overhead projector pens (4)

game cards (12)

half box for storage



PLAYING INSTRUCTIONS

1. Choose a card. Study it carefully to see what's missing.
2. Circle the shape at the bottom of your card that you think is missing.
3. Can you draw the missing shape into the picture?
4. How many cards can you do?
5. Be sure to show a grown-up and tell them about your work when you're finished.

MAKING INSTRUCTIONS

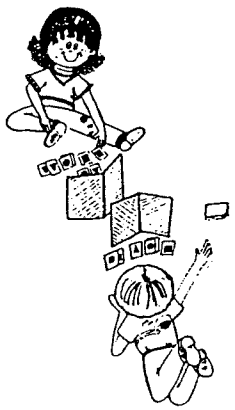
Game Cards (12)
Locate What's Missing? game cards in the cardstock portion of this packet. We suggest you leave these black and white as children feel they're adding the final touch with their black pens. Laminate or cover with clear Contact paper. Store cards and pens in a half box. Be sure to have damp and dry paper towels available when children are using this activity during Independent Practice Time.

Rotten Rectangle (2–4 Children)

Box ingredients→ game cards (27)

manila file folders (4)

standard box for storage



PLAYING INSTRUCTIONS

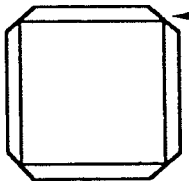
1. Put all cards face down in a pile and mix them up.
2. Pass out all cards, one by one, to each player.
3. Set up your cards using your file folder as a "shield". Look them over carefully. If you have any "partners", put them in the middle. Can you say the shape names and colors?
4. When every player has set out their partners, take turns selecting a card from the person

next to you in the circle, just like "Old Maid".

5. The last person holding Rotten Rectangle wins or loses—the children decide.

MAKING INSTRUCTIONS

Game Cards
Locate Rotten Rectangle game cards in the cardstock portion of this packet. Color each pair of shapes in colors you want your children to be able to name, e.g., two small orange circles, two large green triangles, etc. Laminate or cover with clear Contact.



Clip contact paper at corners so you can fold it under.

Store game cards and manila folders in a standard box.

Shapes Search (1–4 Children)

Box ingredients→

game cards (2)

numberline helper cards (2)

Vis-a-Vis or overhead projector pens (4)

standard box for storage

PLAYING INSTRUCTIONS

Children use pens to search for each shape, marking with a dot or small "X" as they find them. They record the number of each shape found on their game card.

Note: Be sure to have the numberline helper cards out. They are quite helpful.

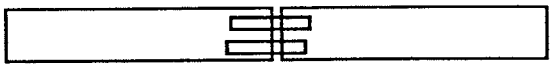
The purpose of this activity is to help children become aware of the shapes in their world. Please don't worry about "right" answers. It is a genuine joy when you sit down with a child and he or she shows you how the counting was done. They so often show you things you would not have seen and give you so many insights into their perceptions of counting and searching for shapes.

MAKING INSTRUCTIONS

Game Cards (12)
Locate the Shapes Search game cards in the cardstock portion of this packet. Color with light crayon or water-based felt pens. Laminate or cover both sides with clear Contact paper.

Numberline Helper Cards (2)
Locate Numberline Helper Cards in the cardstock portion of this packet. Laminate or cover with clear Contact paper. Hinge them on the back side with tape. (These serve as models to help the children see which direction the number faces. It also helps any child who is learning numerals to find the one he or she wants to use.)

numberline helper cards



back side

Store Numberline Helper cards, gamecards and pens in a standard box. Be sure to have damp and dry paper towels available when children are using this activity during Independent Practice Time.

Shapes Race (2 Children)

Box ingredients→ gameboard
spinner
game markers (2)
standard box for storage

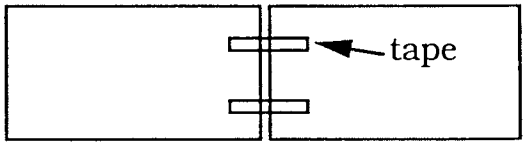
PLAYING INSTRUCTIONS

1. Set up gameboard.
2. Place markers on "go" arrow.
3. Take turns spinning spinner. If the spinner should point to a square, the player who spun moves to the first available square.
4. The first person to arrive at the "Winner" rectangle wins the game.

MAKING INSTRUCTIONS

Spinner
Locate Shapes Race spinner top in the blacklines. Color (if desired) every shape in its own color, squares–red, etc. Assemble as directed in General Making Instructions.

Gameboard
Locate Shapes Race gameboard in the card-stock portion of this packet. Color the shapes, if desired, the same colors used on your spinner, squares–red, etc. Laminate or Contact on both sides. Hinge with filament tape on back sides, connecting gameboards where Shapes Race names touch.



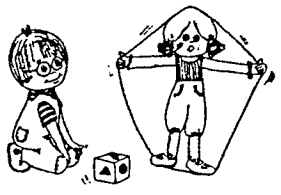
back side of gameboards

Markers (2)
Use two big colored buttons or two different colored unifix cubes for markers. Store markers, spinner and gameboard in a standard box.

Elastic Shapes (2–4 Children)

See Box It or Bag It Mathematics Kindergarten Teachers Resource Guide, CHAPTER 15, Elastic Shapes, for group introduction to this box.

Box ingredients→ elastic loops (4)
shapes die
half box for storage



PLAYING INSTRUCTIONS

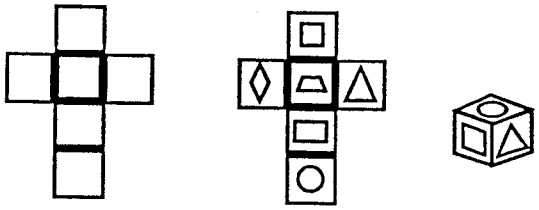
1. Get an elastic loop.
2. Have someone roll the die.
3. Everyone names the shape.
4. Make the shape with your elastic. If you can't make it alone, could you make it with a partner?

5. After you've made many shapes alone, try making all the shapes with a partner.

MAKING INSTRUCTIONS

Elastic Loops (4)
Purchase 8 yards of 1" wide elastic at a fabric store. Cut it into 2 yard lengths. Sew it very firmly into loops.

Shapes Die
Cut six 1-1/2" squares of railroad board. Using scotch tape or narrow filament tape, join die as illustrated.



1. Tape it together as shown.

2. Draw shapes on each surface. 3. Cover with clear Contact paper. Trim extra edges.

4. Fold up to form cube. 5. Tape edges.

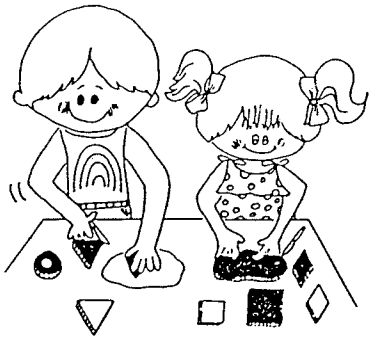
Note: A hazard of this activity is that the die occasionally gets stepped on. The sturdier the cardboard you choose, the better chance it has of survival!

Store shapes die and elastic loops in half box.

Play Dough Shapes (1–4 Children)

Box ingredients→

rolling pins (4)
solid Bakers Dough shapes (10)
play dough (2 tubs)
plastic knives (4)
standard box for storage



PLAYING INSTRUCTIONS

1. Choose a solid dough shape.
2. Roll out some play dough with your hands and your rolling pin.
3. Form a shape just like the solid shape you chose.
4. Show it to a friend.
5. Can you form more shapes?

MAKING INSTRUCTIONS

Rolling Pins or Doweling (4)
Purchase small rolling pins at a toy store or find someone to cut 5" lengths of 1" wooden doweling (purchased at a lumber store).

Solid Bakers Dough Shapes (10)
Mix thoroughly 3 cups white flour and 1 cup salt. Add 1-1/4 to 1-1/2 cups of water. Mix until moist throughout. Knead on floured surface about five minutes until it is smooth and no longer sticky.

Roll it out about 1/2" thick. Form the following solid shapes or more:
two rectangles, each a different size
two triangles, each a different type
two squares of different sizes
one circle
one doughnut-type circle
one oval
one diamond

If your shapes look like they will crack, smooth them lightly with a bit of water. (Some will split in baking anyway, but the children won't mind.)

Bake 1-1/2 to 2 hours at 300 degrees.

Note: Plastic or wooden shapes could be used instead.

Play Dough (2 tubs)
Mix following dry ingredients thoroughly:
- 2 cups white flour
- 1 cup salt
- 1 tablespoon of powdered alum (available in spice section of many grocery stores)

Boil:
- 2 cups water
- 2 tablespoons of salad oil
- food coloring
- flavoring extract, if desired, for a nice fragrance

Add boiling ingredients to dry ingredients. Mix thoroughly. Don't worry yet about the lumps.

Let it cool until it can be easily handled. Knead for about five minutes until it is completely smooth. Let it continue to cool until all warmth is gone. At that time, seal it into margarine tubs. It will last weeks and weeks unless the lids get left off.

Plastic Knives (4)
Get a small package of durable plastic knives in the picnic section of your grocery store. Store knives, margarine tubs of playdough, solid bakers dough shapes and rolling pins in a standard box.

Spin and Count (2 Children)

See Box It or Bag It Mathematics Kindergarten Teachers Resource Guide, CHAPTER 15, Spin and Count, for group introduction to this box.

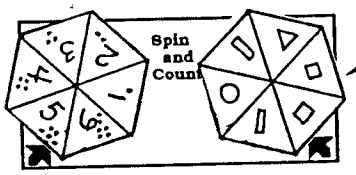
Box ingredients→
- double spinner
- gameboards (2)
- Vis-a-Vis or overhead projector pens (2)
- standard box for storage

PLAYING INSTRUCTIONS

Take turns to:
1. Spin both sides of the double spinner.
2. Mark off appropriate number of shapes indicated by the spinners.
3. The first person who completely fills his or her shape board wins.

MAKING INSTRUCTIONS

Double Spinner
Cut a sturdy piece of cardboard 5 X 10-1/4. Use spinner tops from blacklines. Follow spinner assembly directions in General Making Instructions but mount tops on base as pictured.



Edge of spinner overlaps spinner base about an inch (both sides).

Draw an arrow in each corner.

Gameboards (2)
Locate Spin and Count gameboards in the cardstock portion of this packet. Laminate or cover with clear Contact paper. Store gameboards, double spinner, and pens in a standard box. Be sure to have damp and dry paper towels available when children are using this activity during Independent Practice Time.

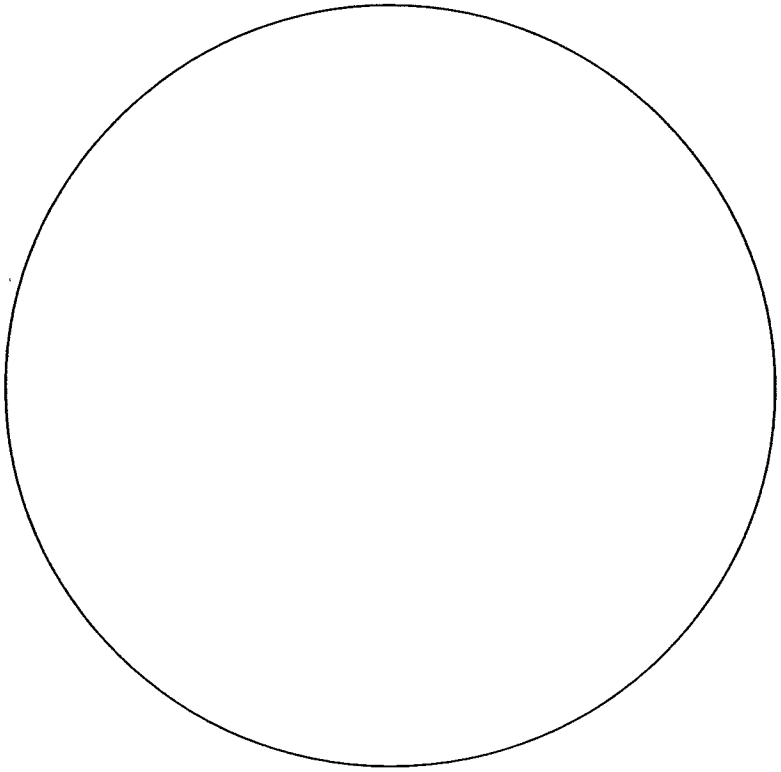
Blacklines

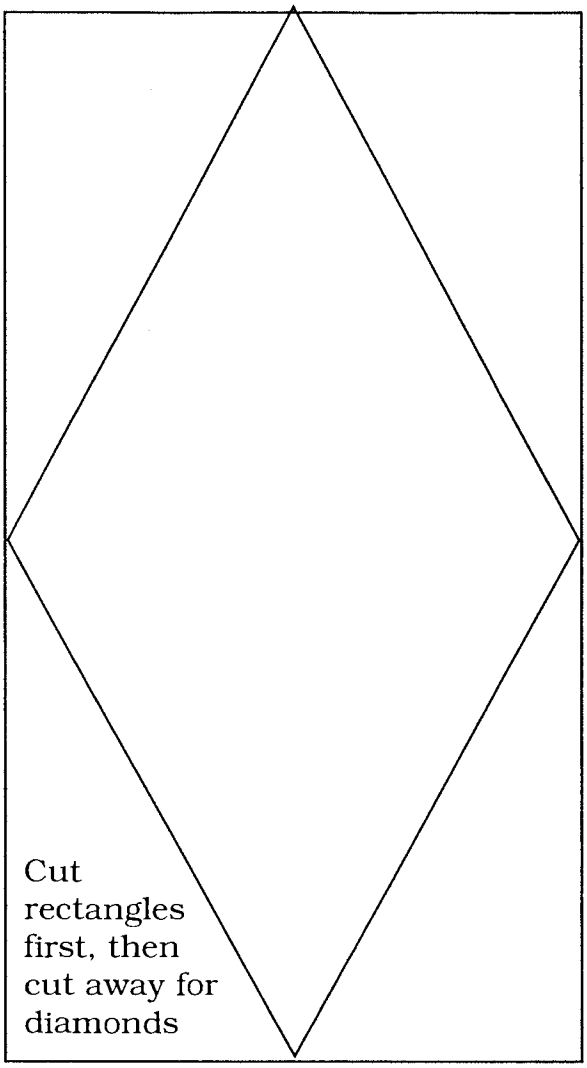
Patterns, cards, spinners, and other materials you'll make for the Practice & Enrichment Boxes described in this packet.

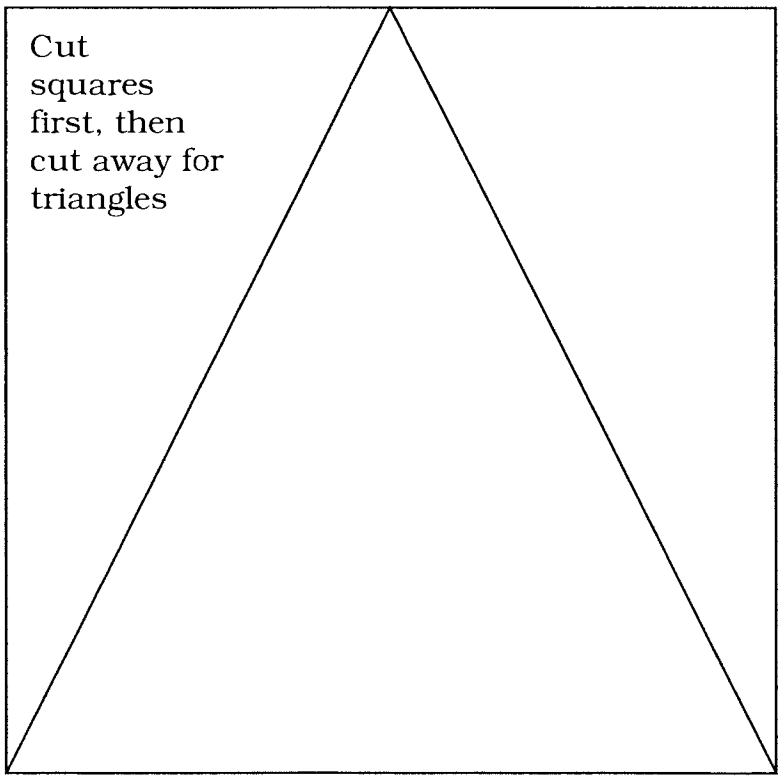
Shapes Floor Graph

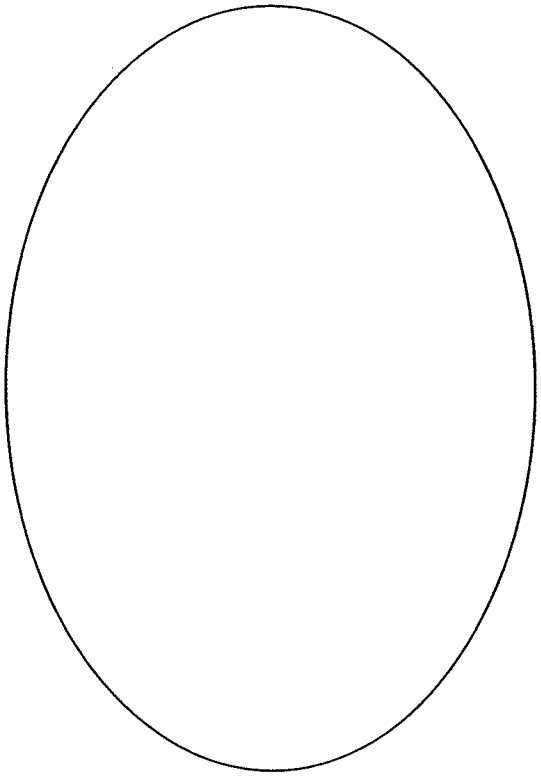
Patterns to cut shapes for each packet

Cut 6 of each shape



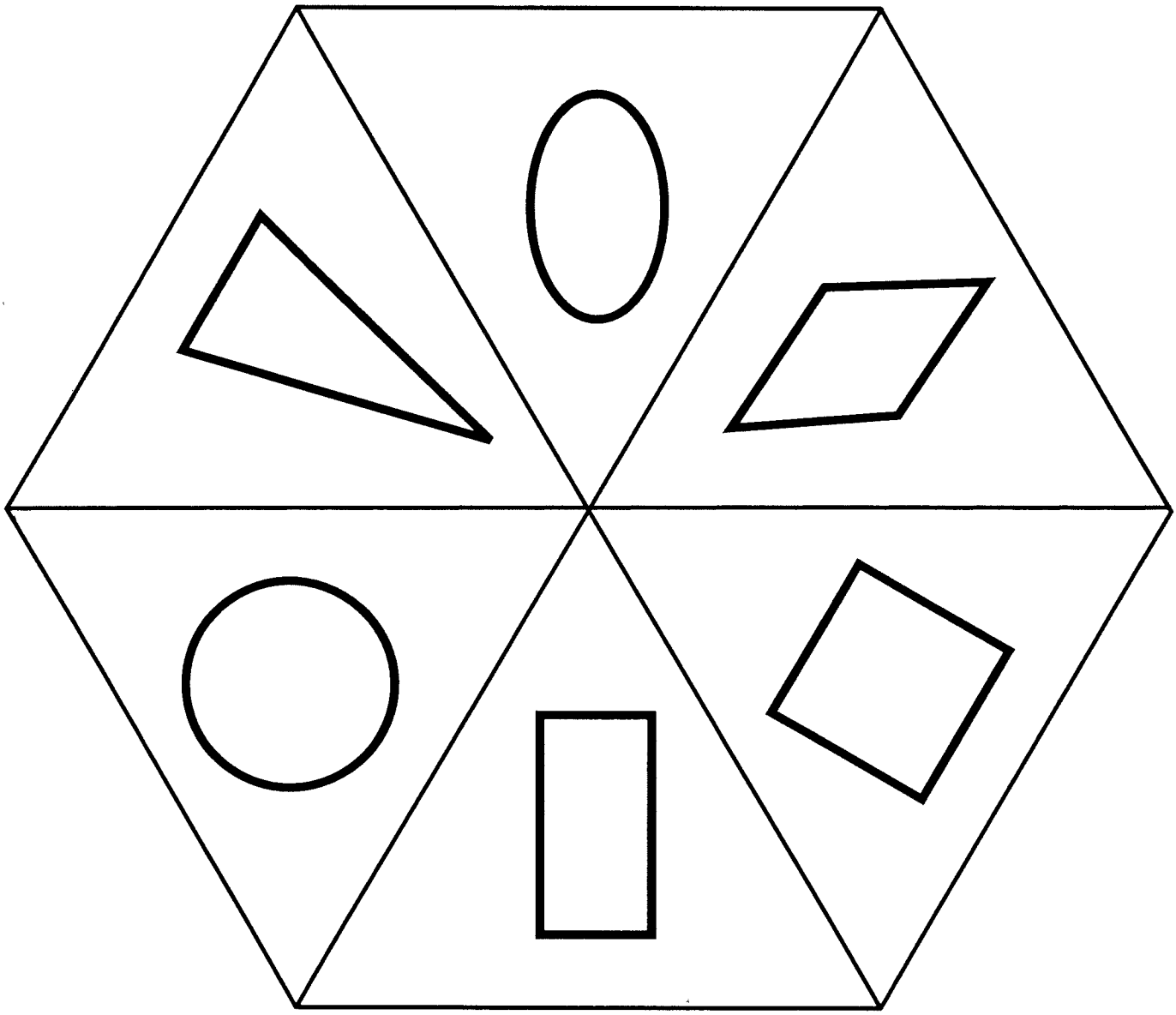




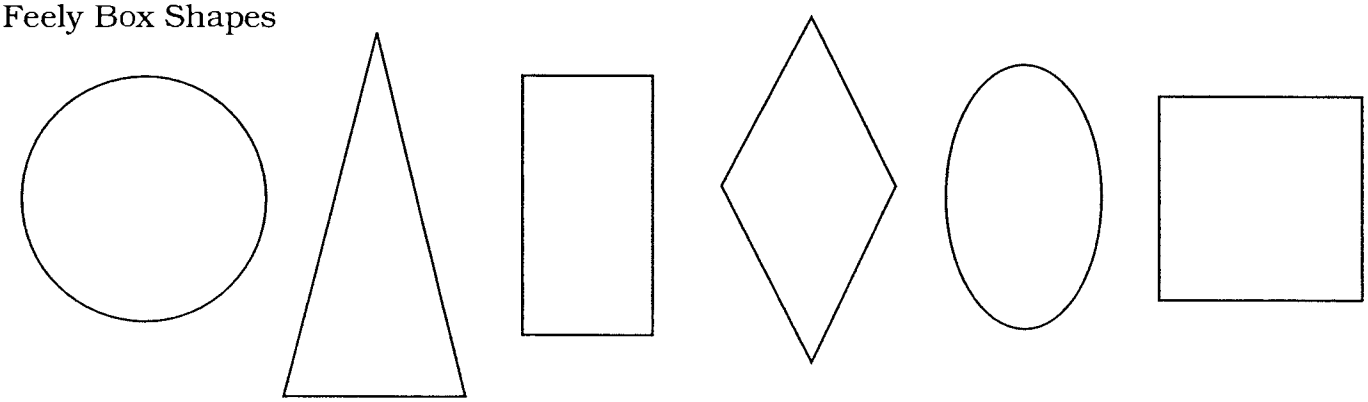


Feely Box Shapes Spinner Top

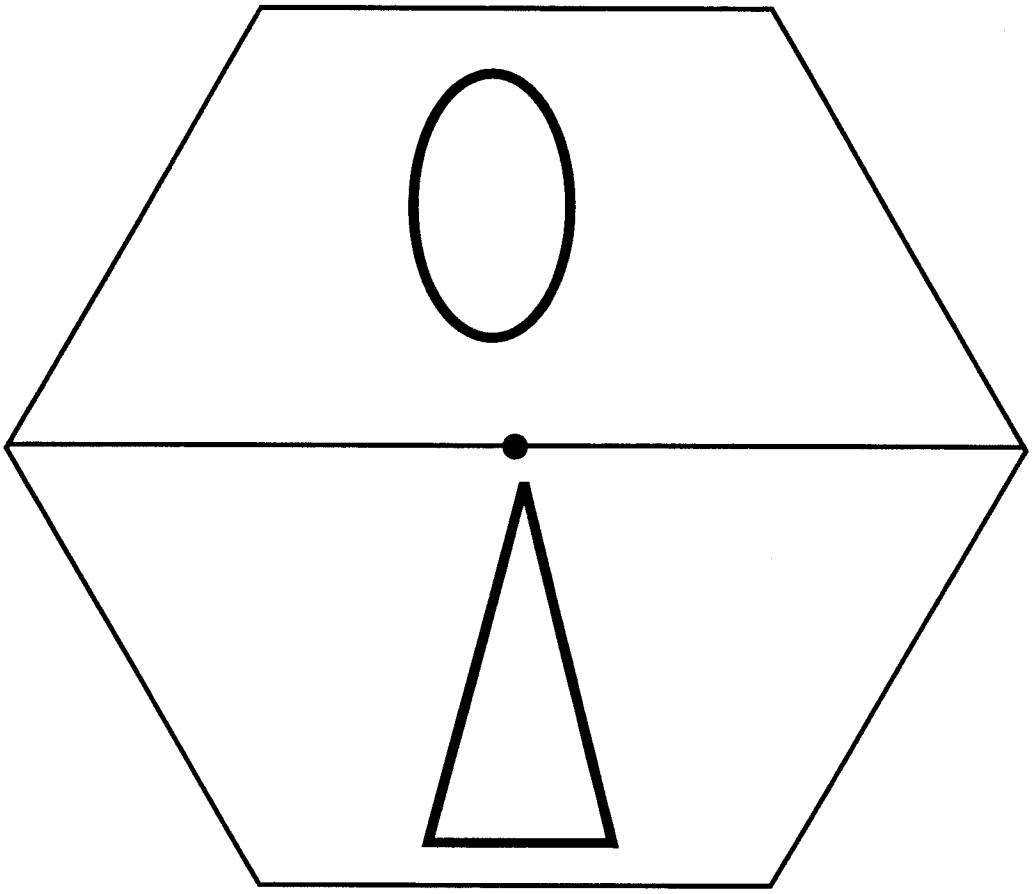
Make up all 3 spinners (pages 17 and 18).
Children choose level of difficulty.

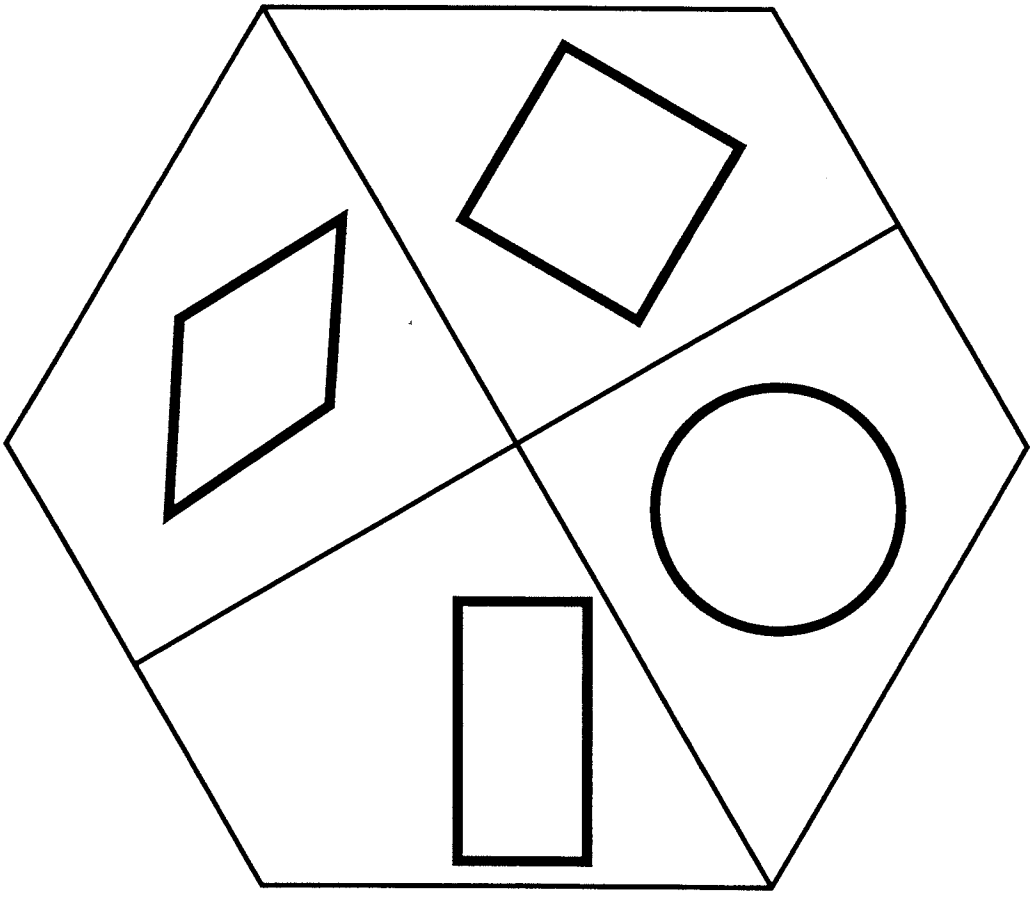


Patterns for cutting out
Feely Box Shapes



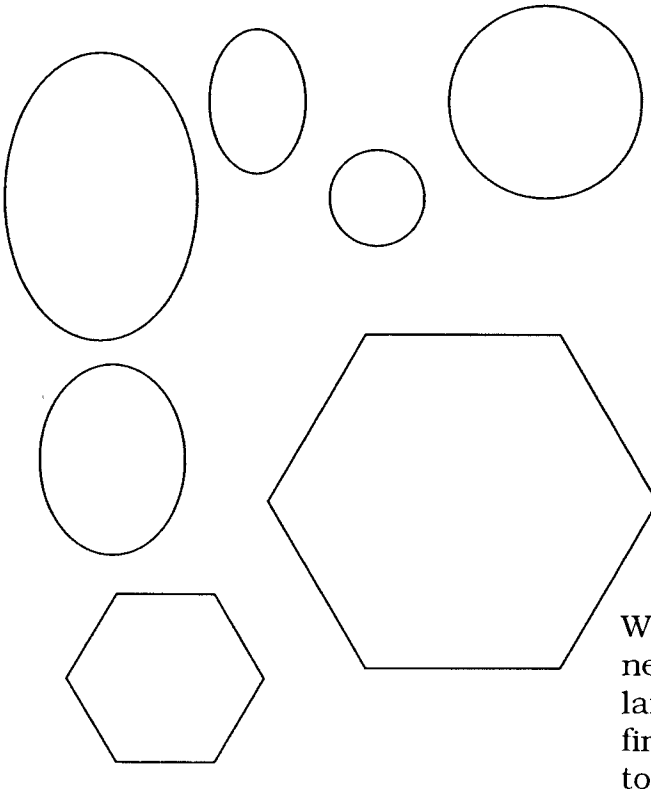
Feely Box Shapes Spinner Tops

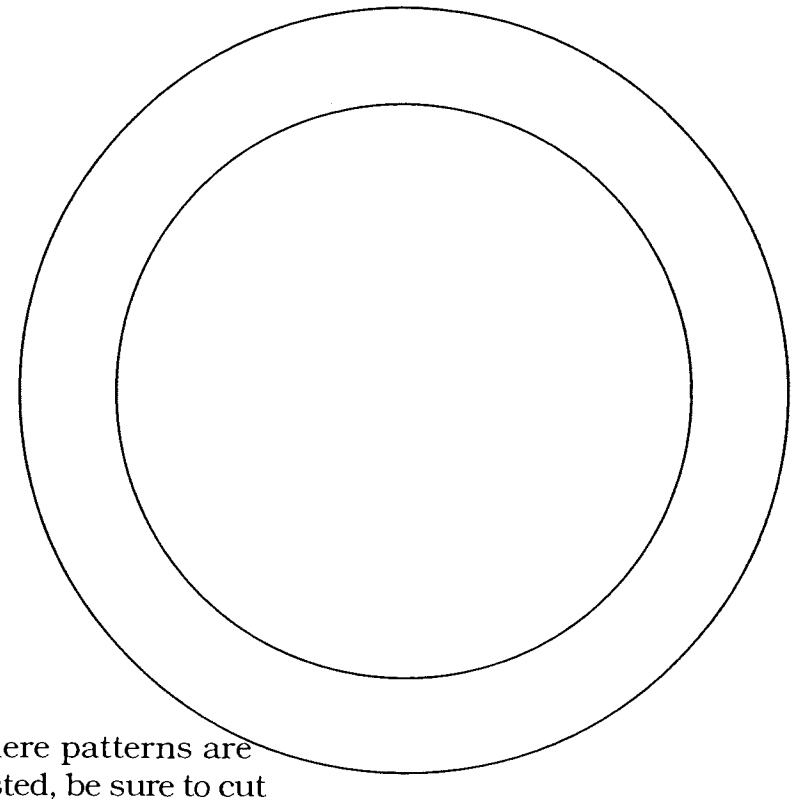




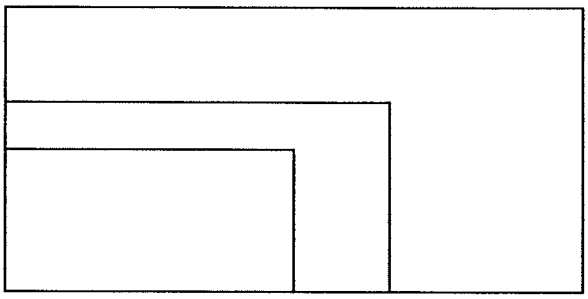
Felt Shapes

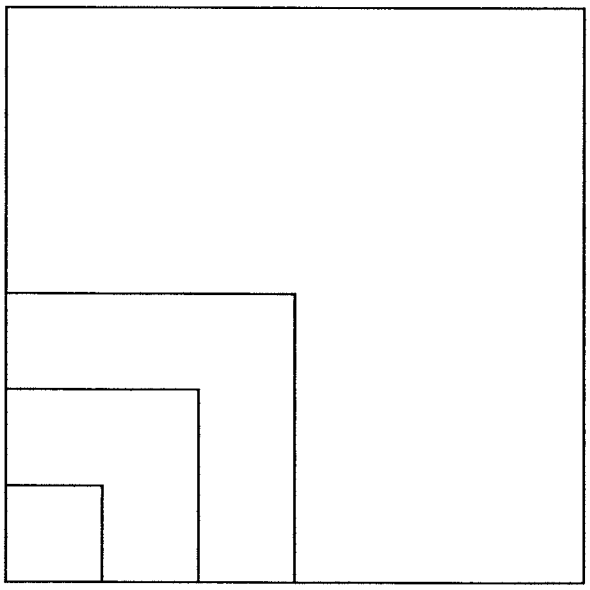
Shapes to use for cutting felt

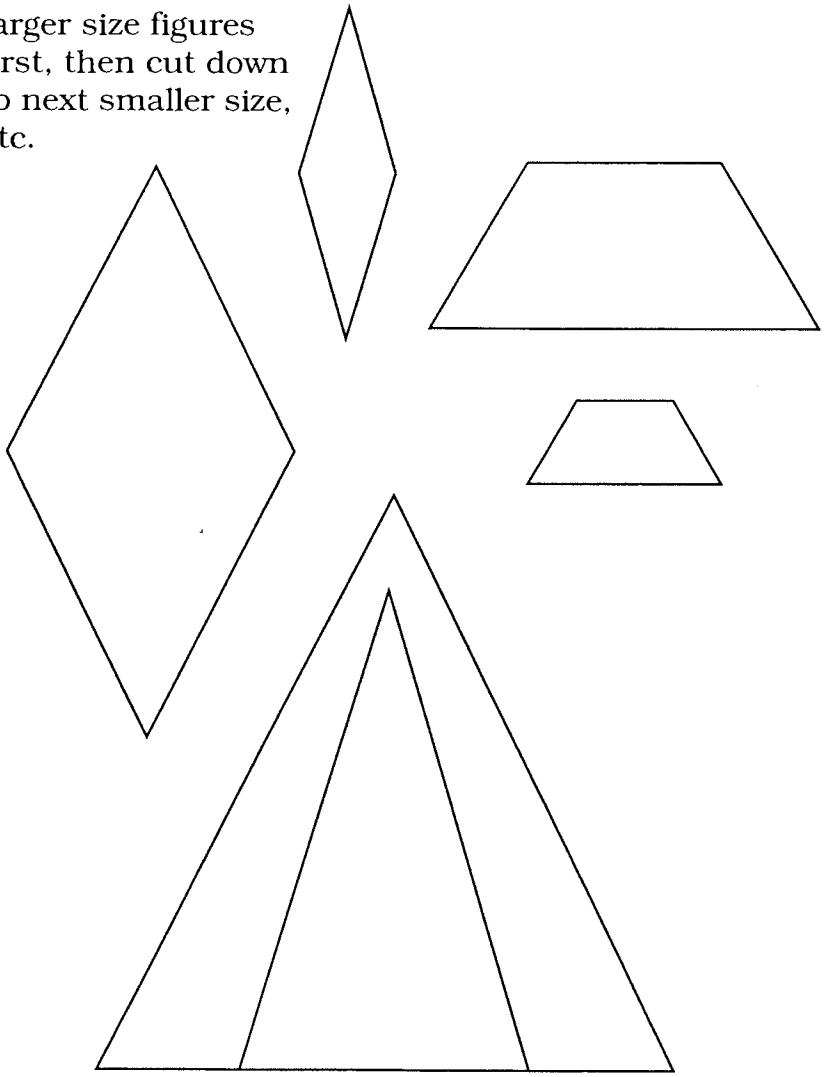




Where patterns are nested, be sure to cut larger size figures first, then cut down to next smaller size, etc.

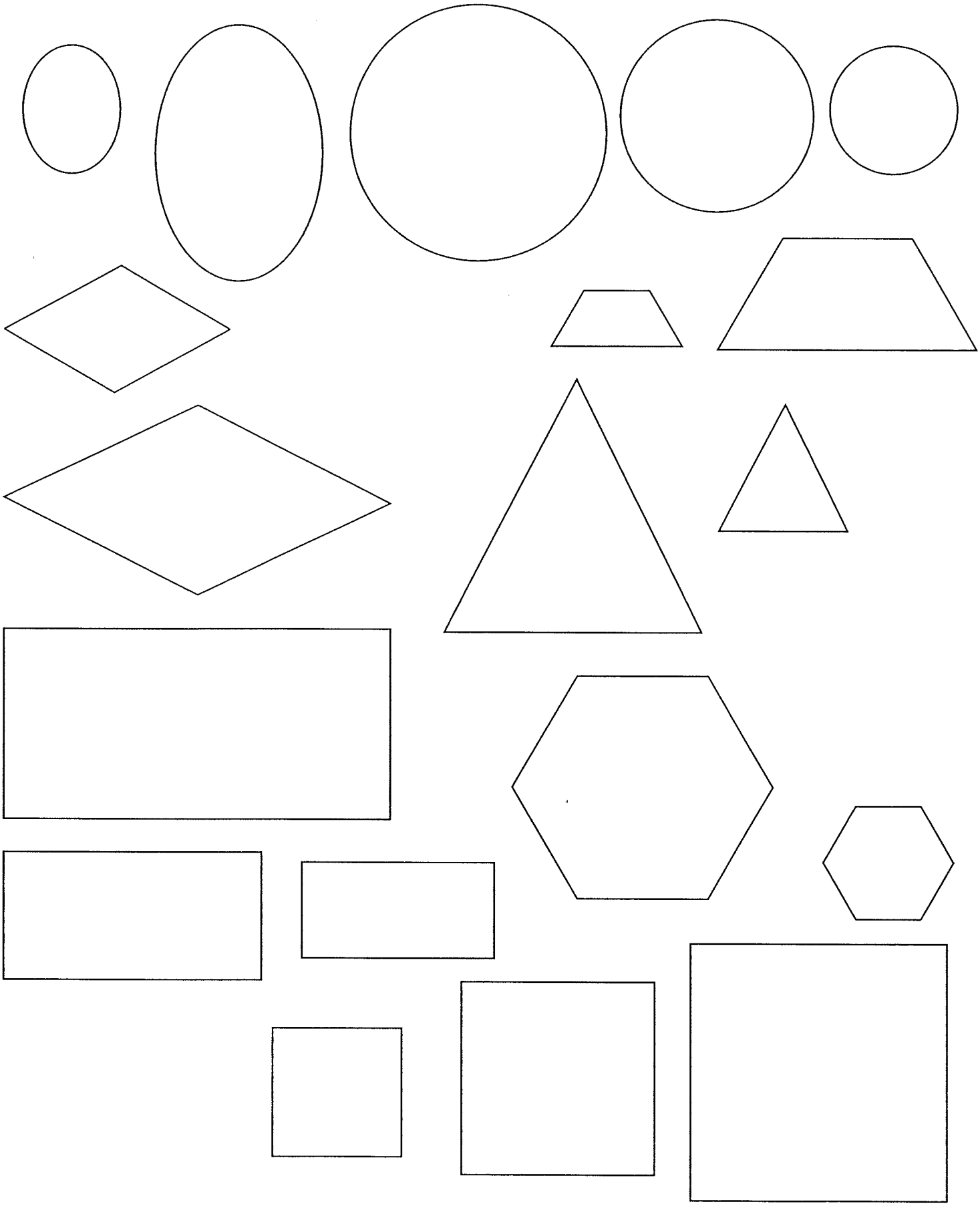




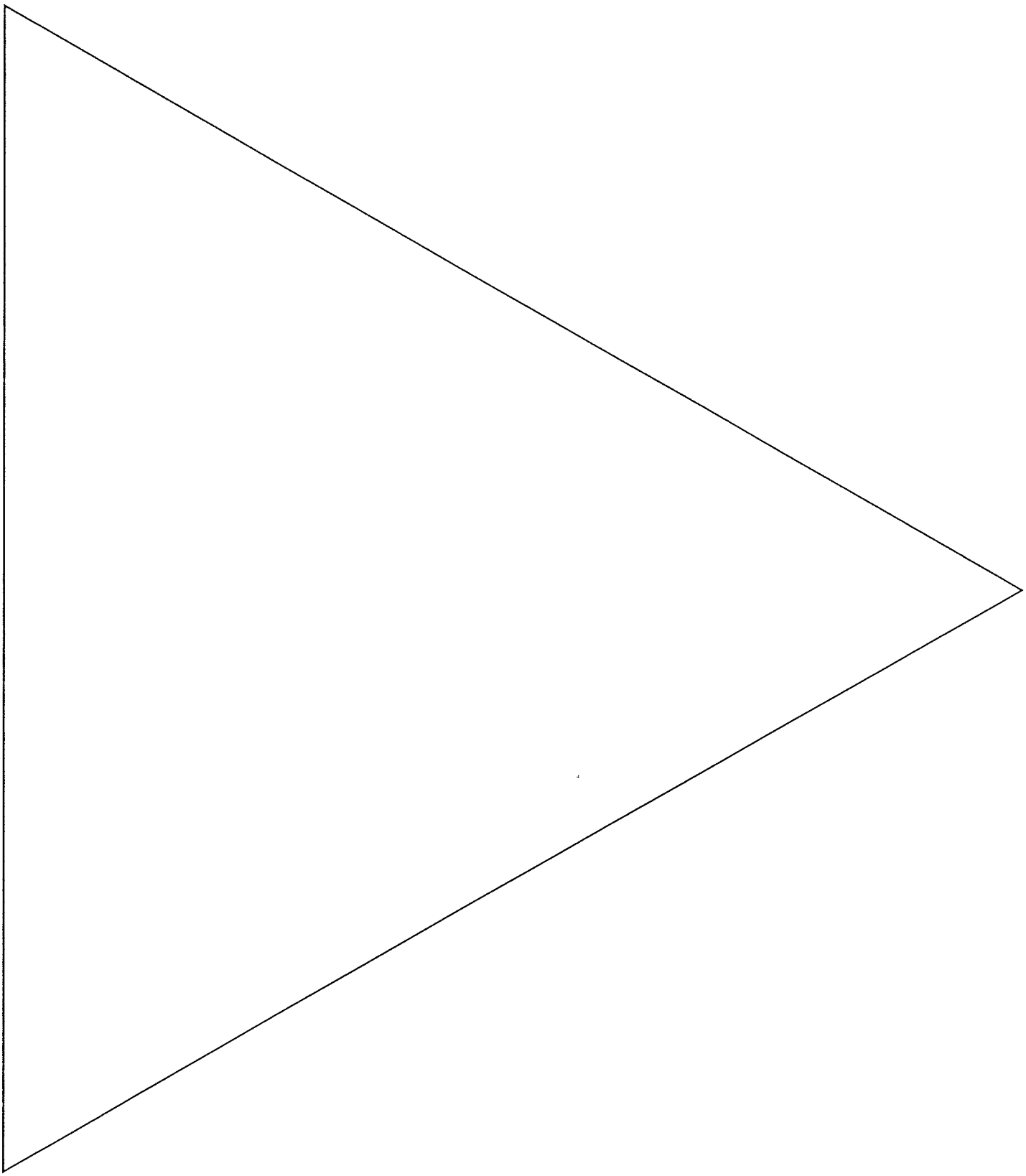


Shapes Templates

Shapes to help you cut individual templates from small margarine lids.

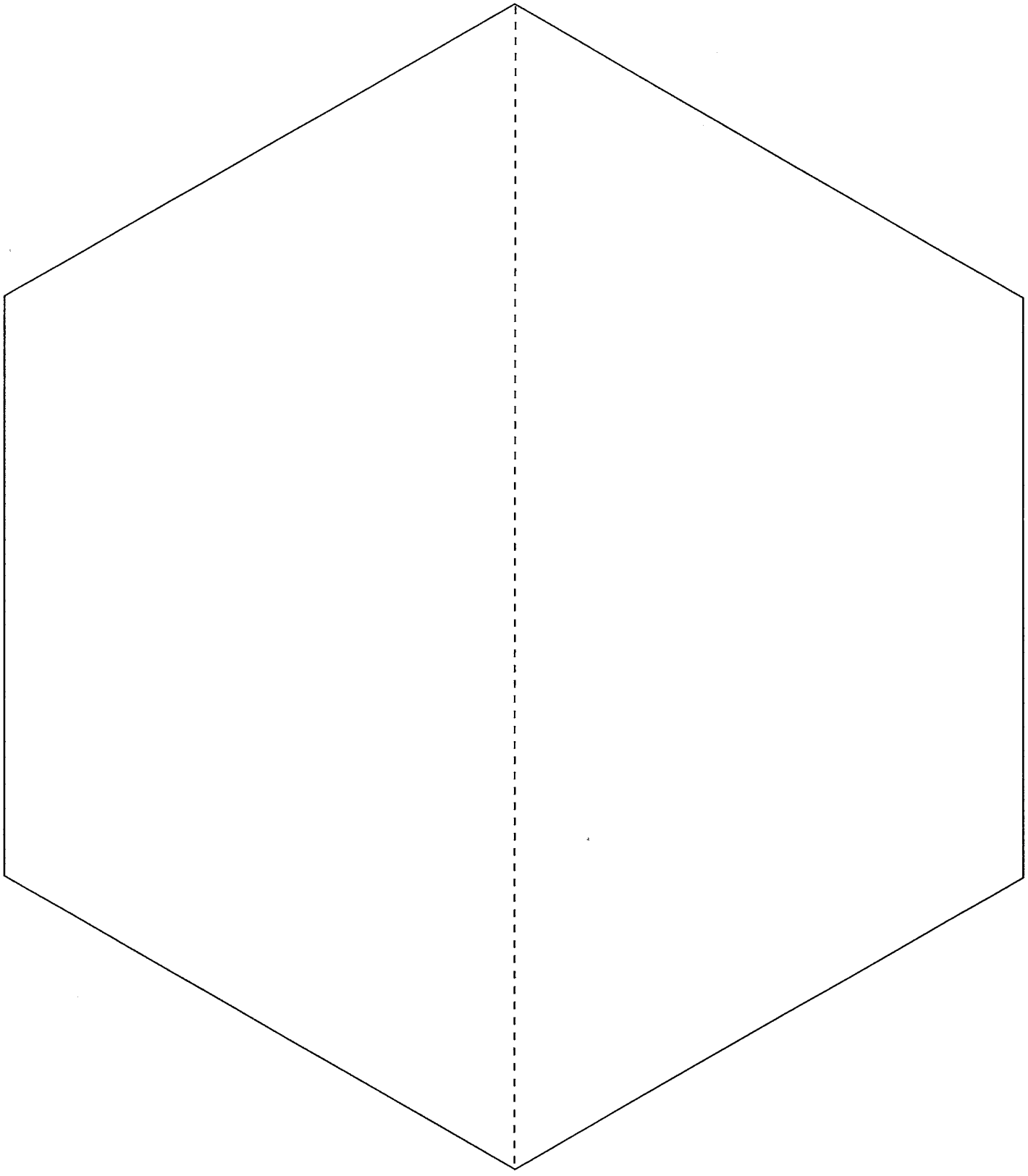


Shapes Mat Patterns

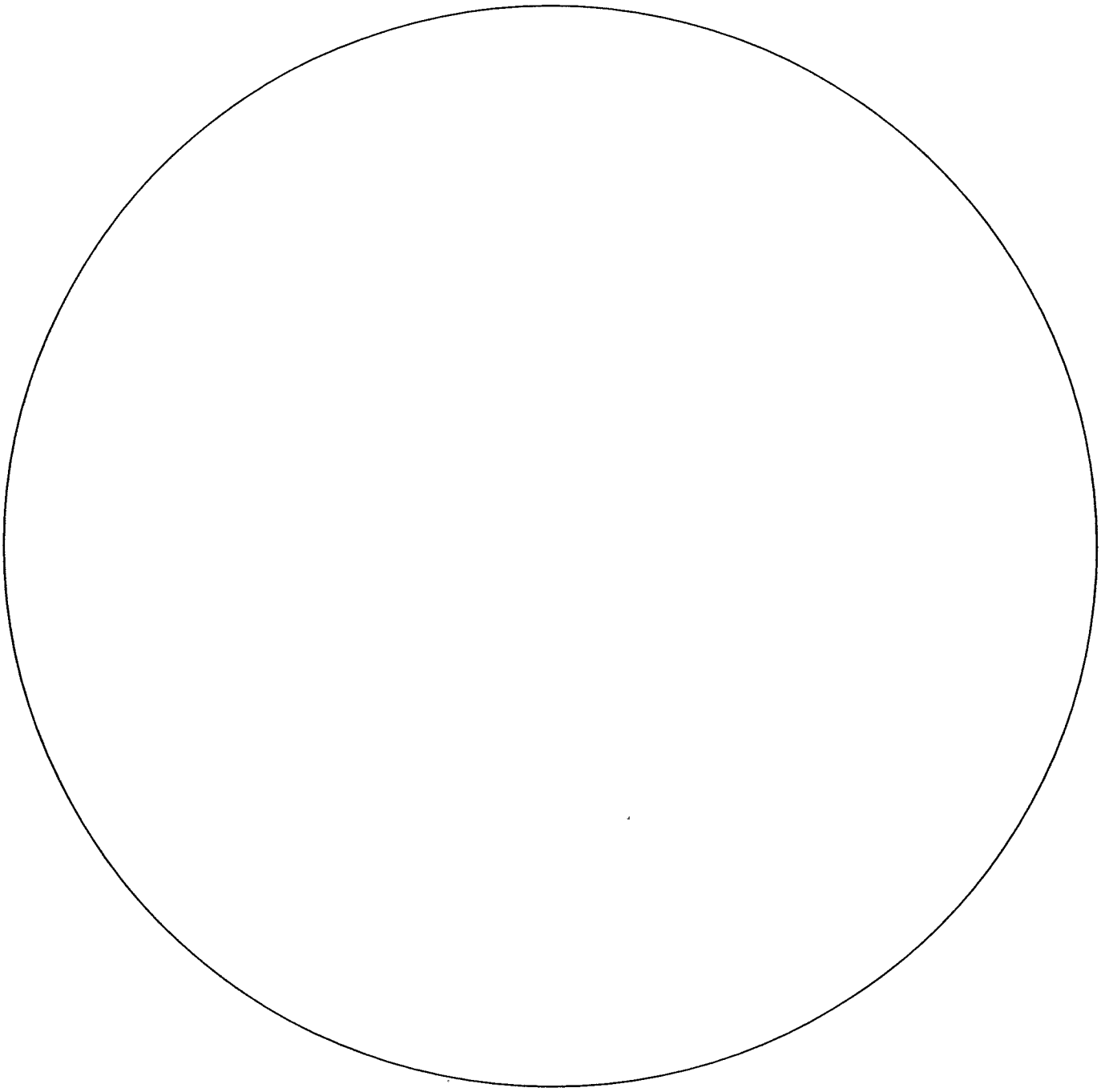


Shapes Mat Patterns

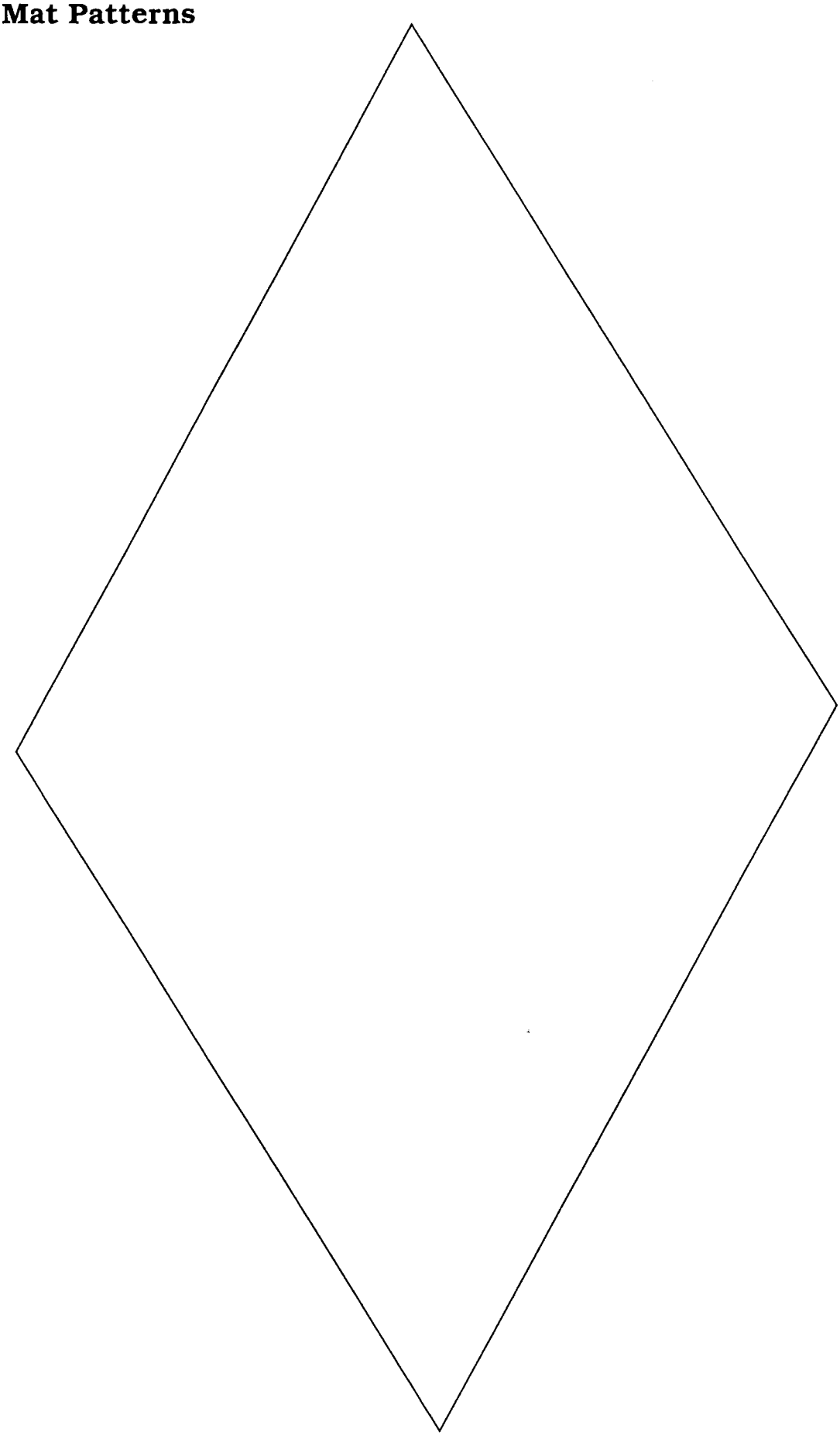
To cut trapezoid, fold hexagon pattern in half on dotted line.



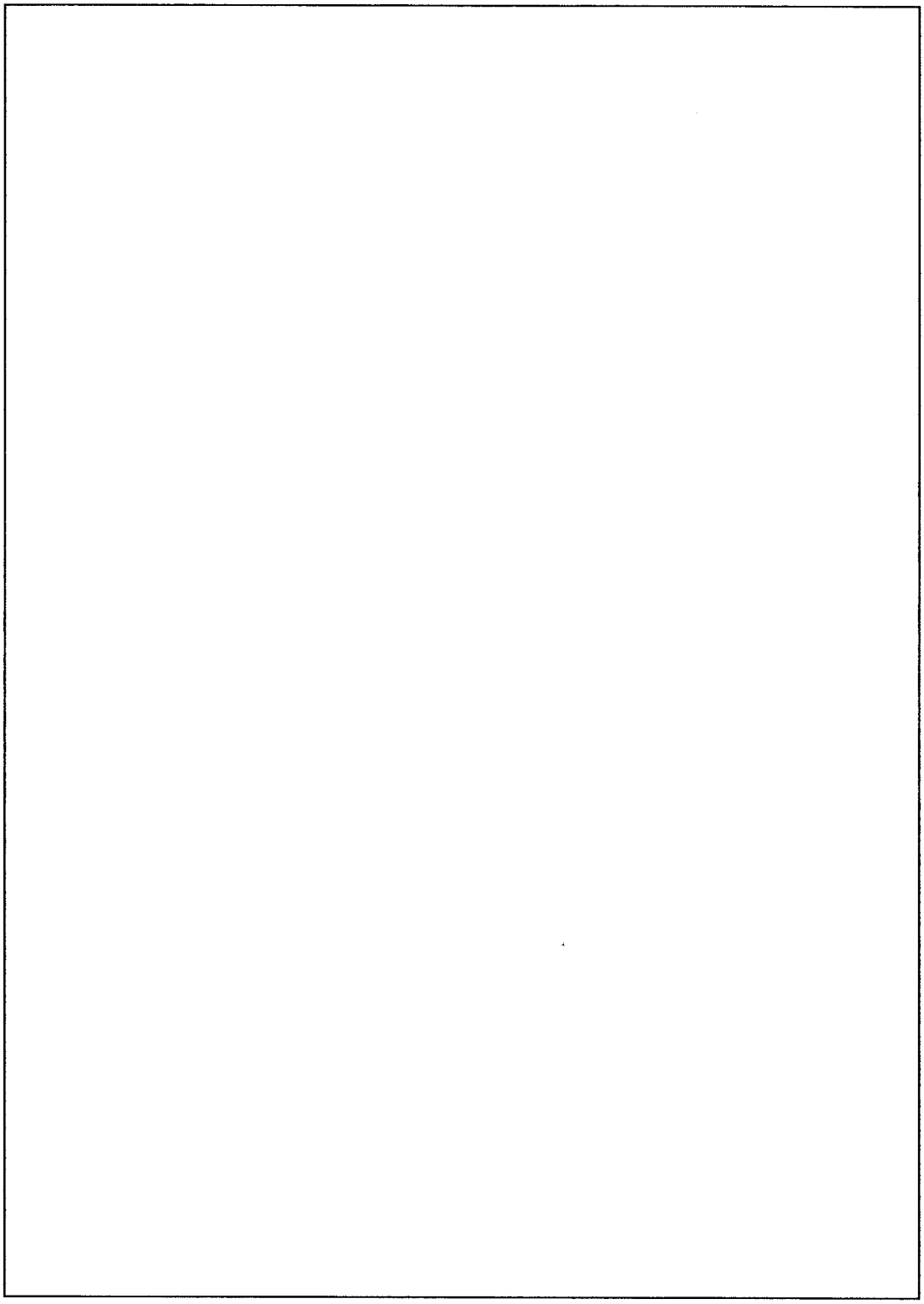
Shapes Mat Patterns



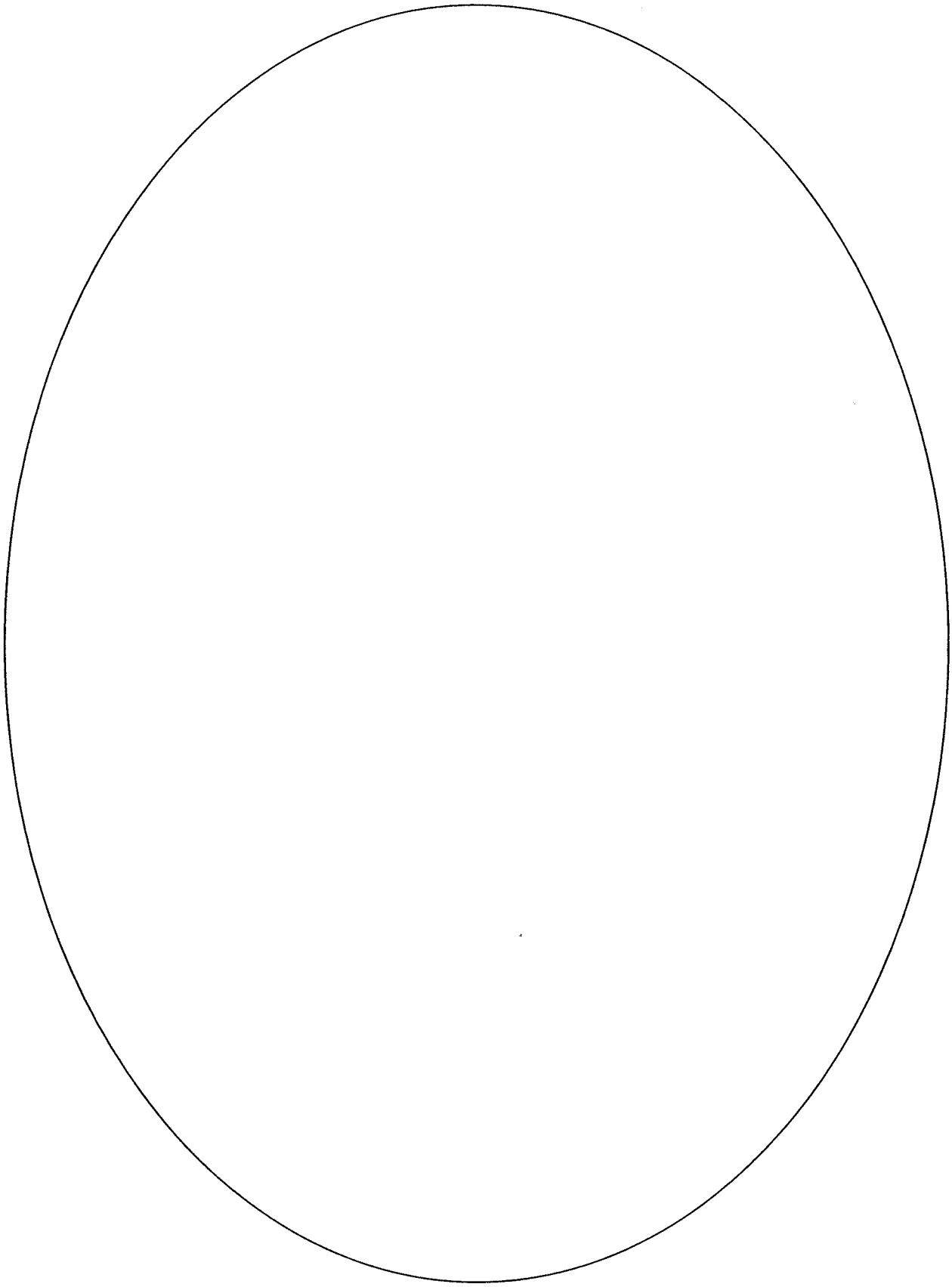
Shapes Mat Patterns



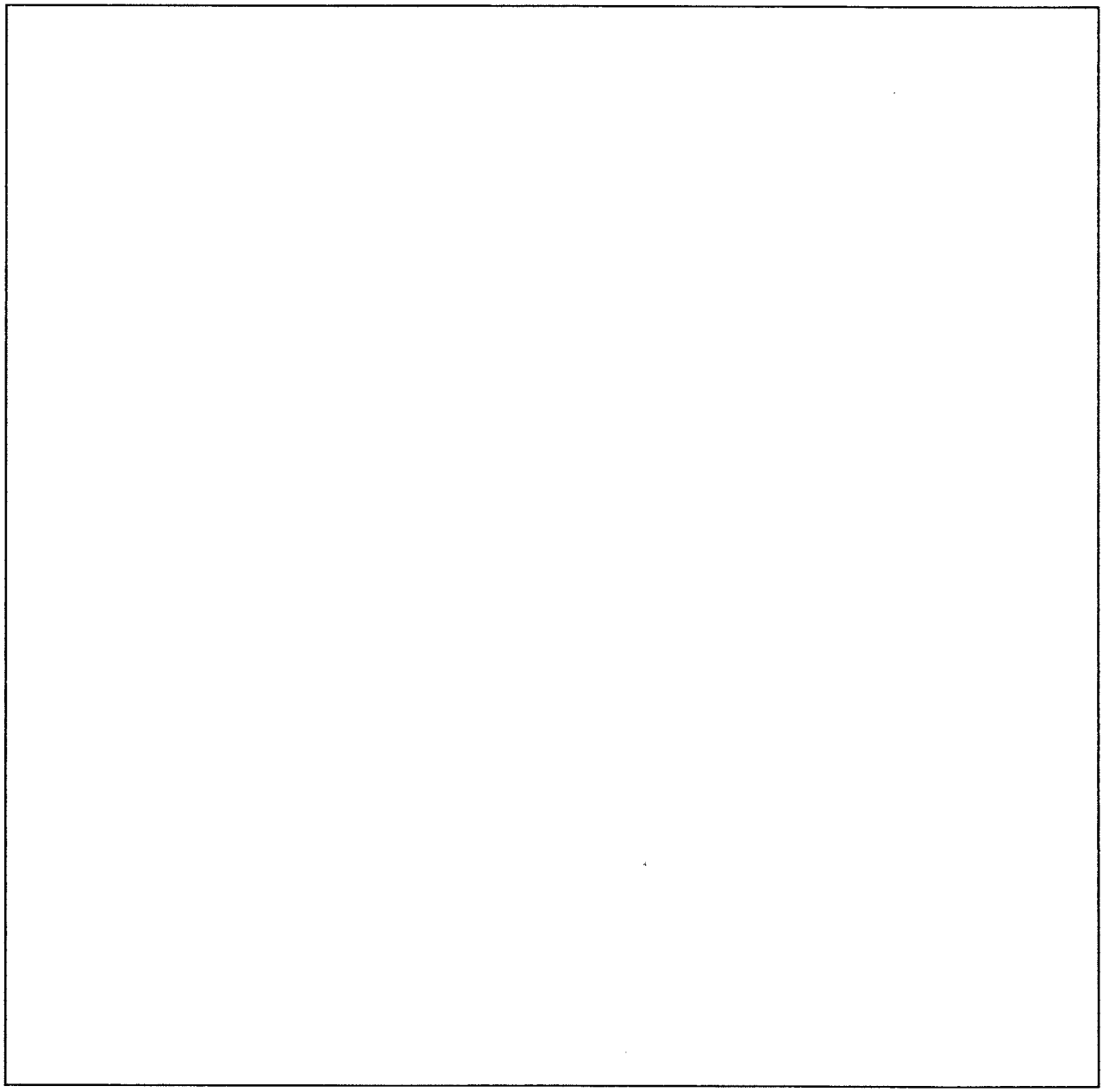
Shapes Mat Patterns



Shapes Mat Patterns

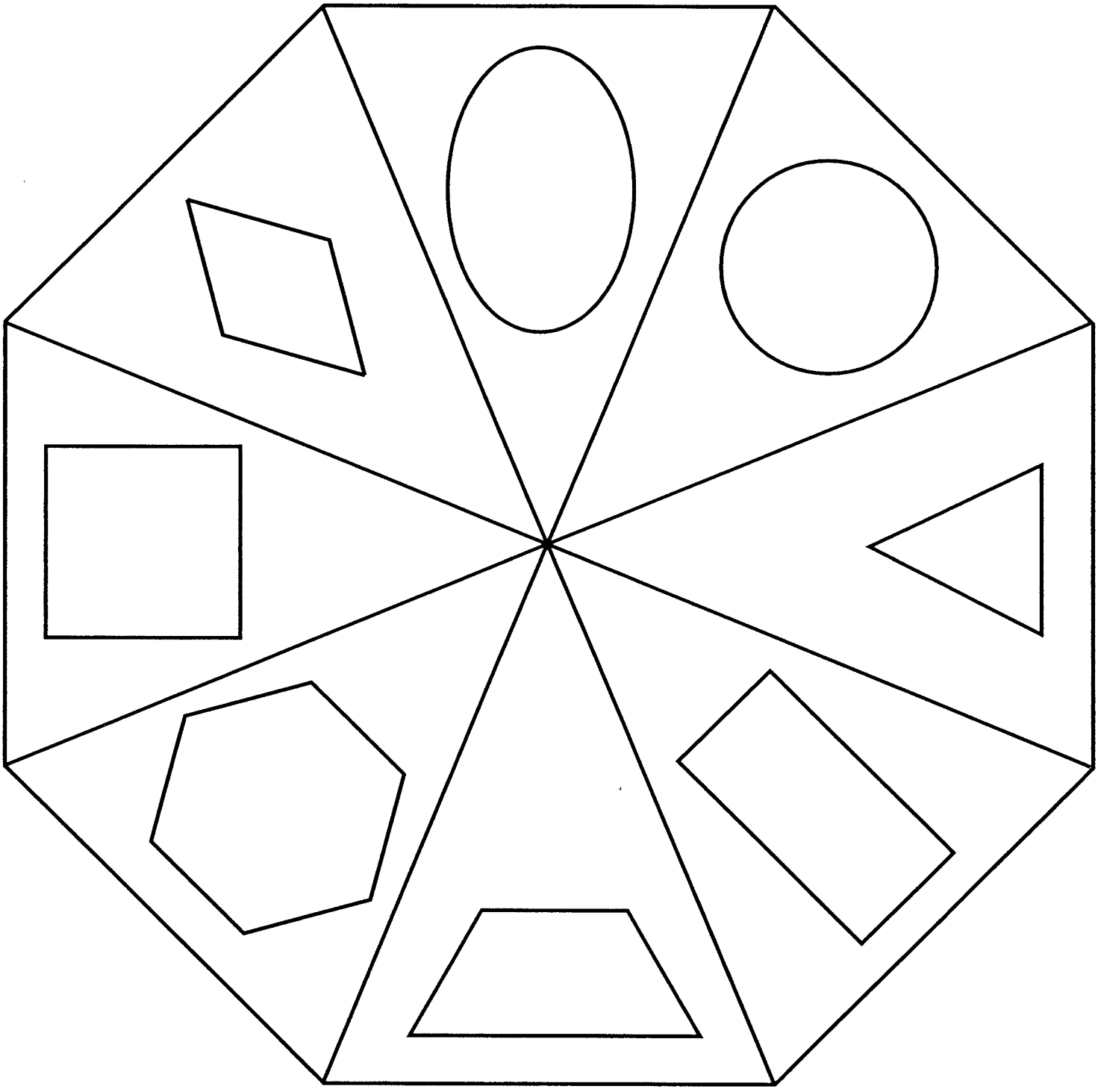


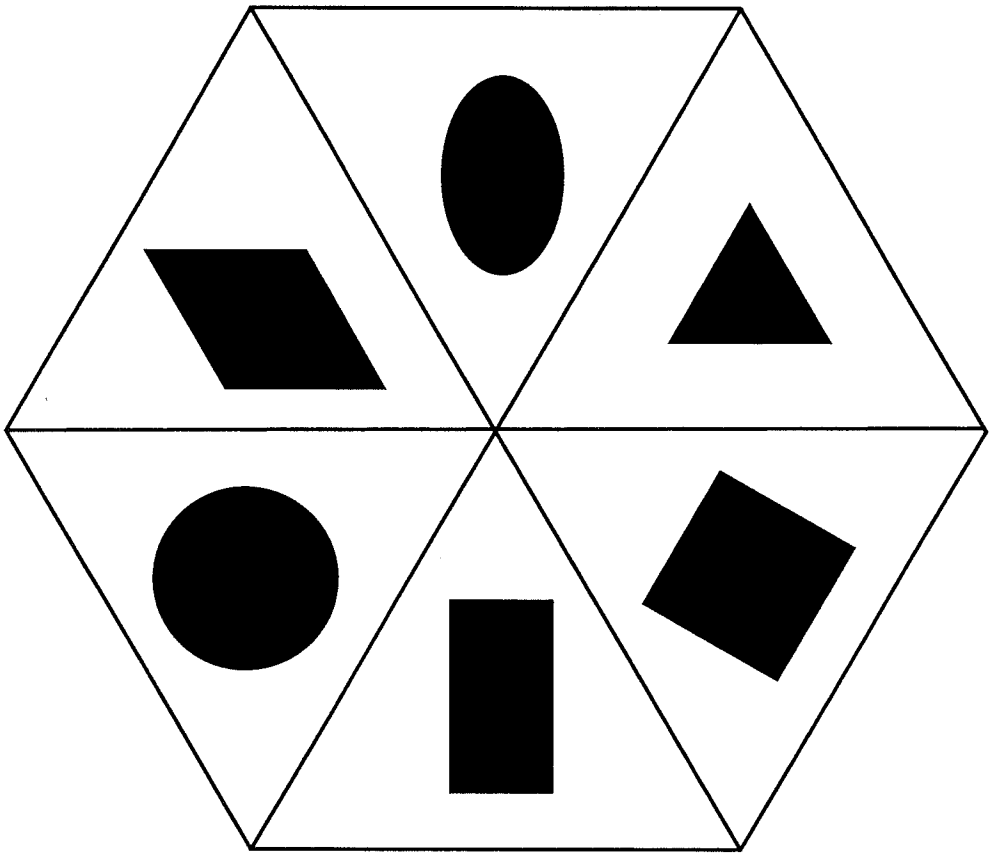
Shapes Mat Patterns

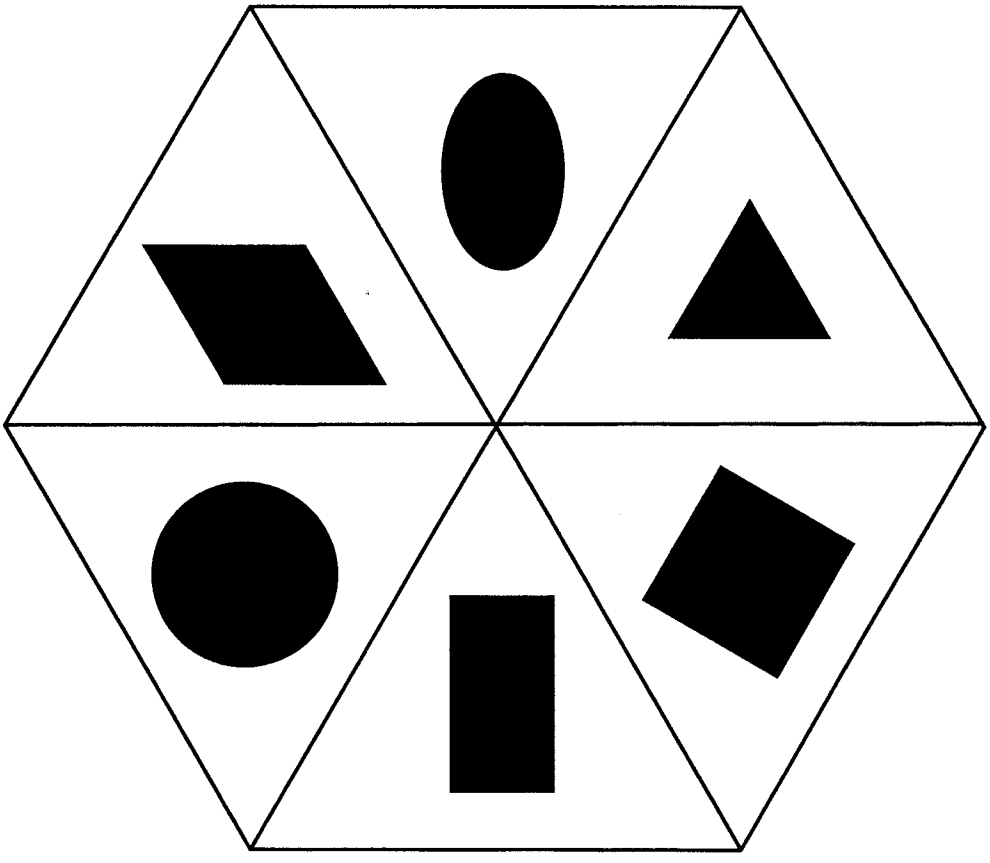


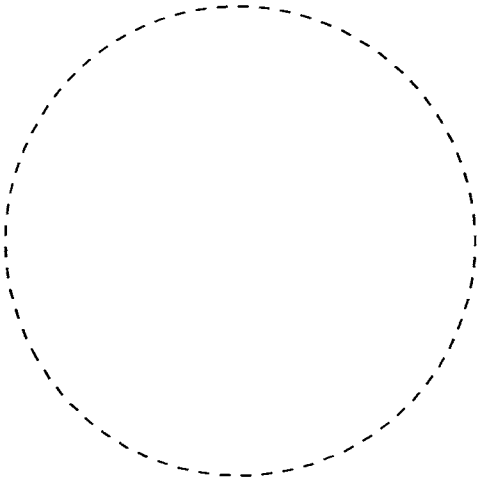
Shapes Mat

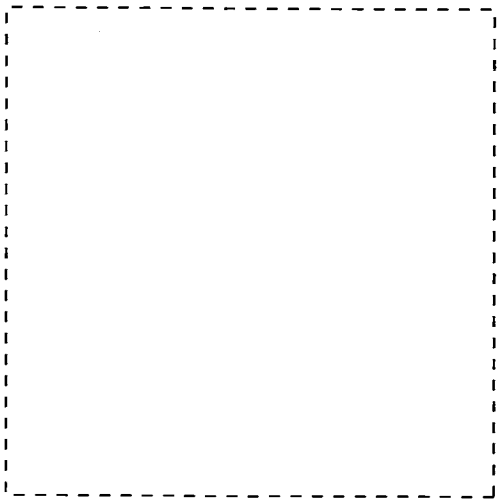
spinner top

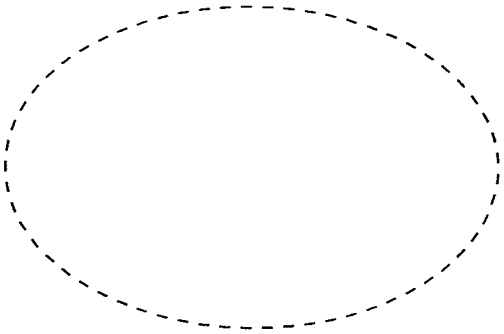


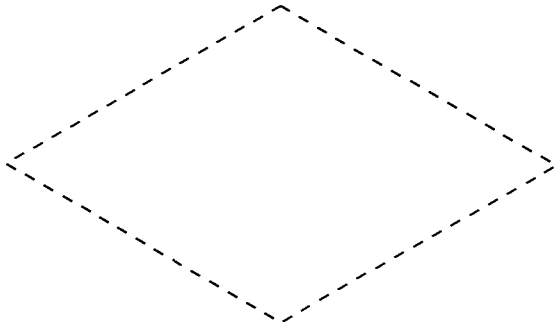


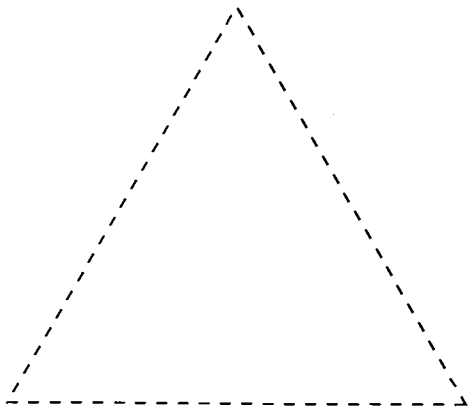


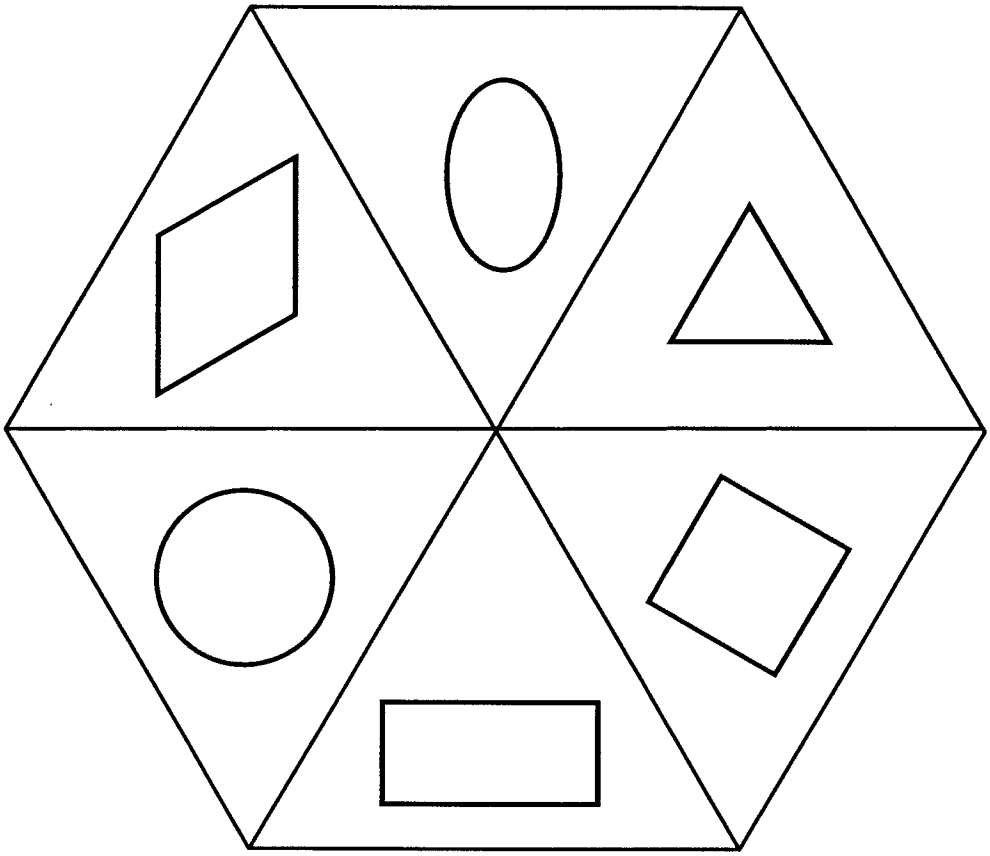




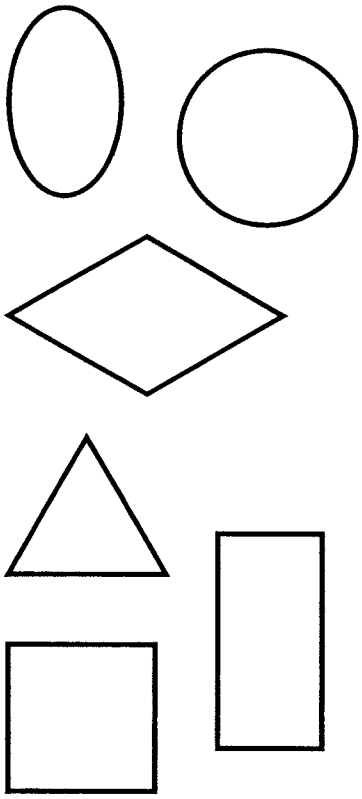


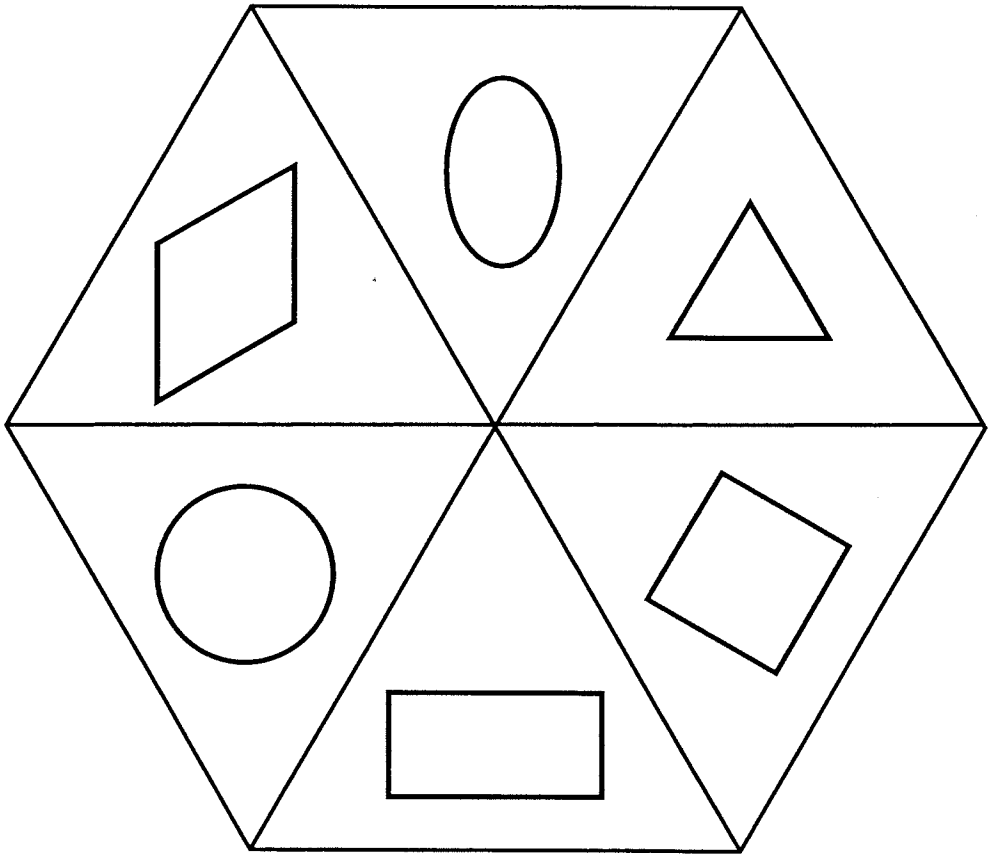




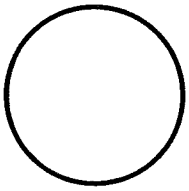
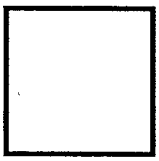
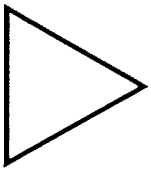
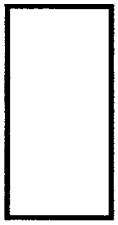
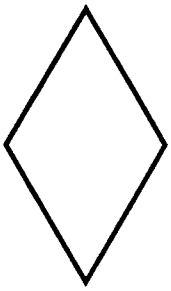
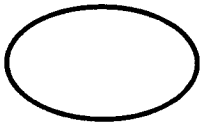


Patterns to help cut plastic lids

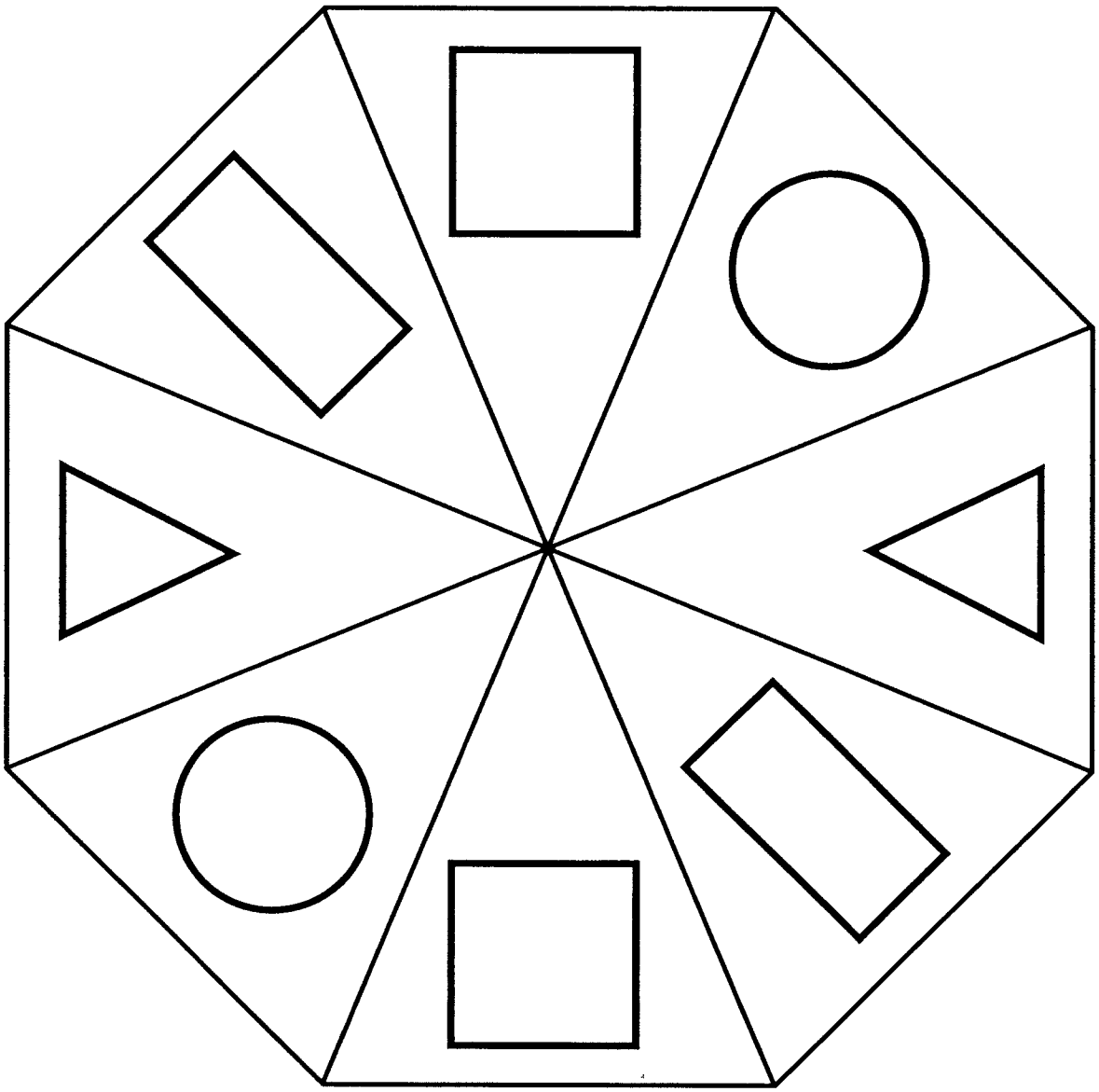




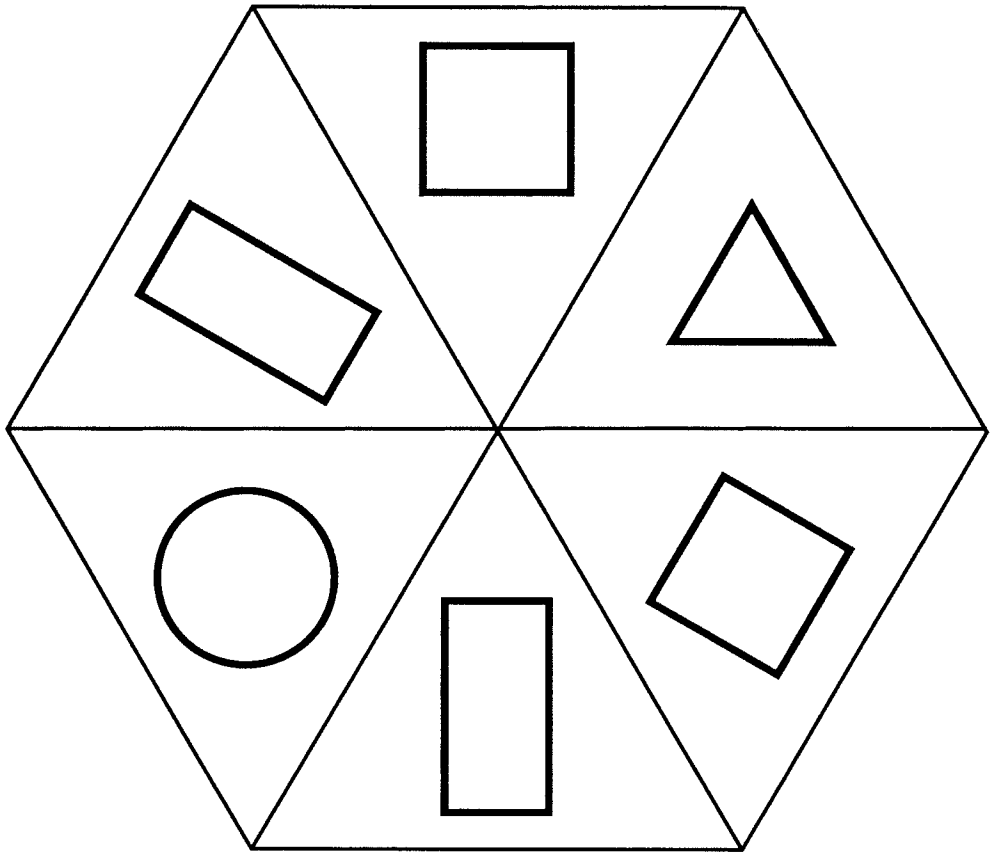
Templates and Spinners record sheet

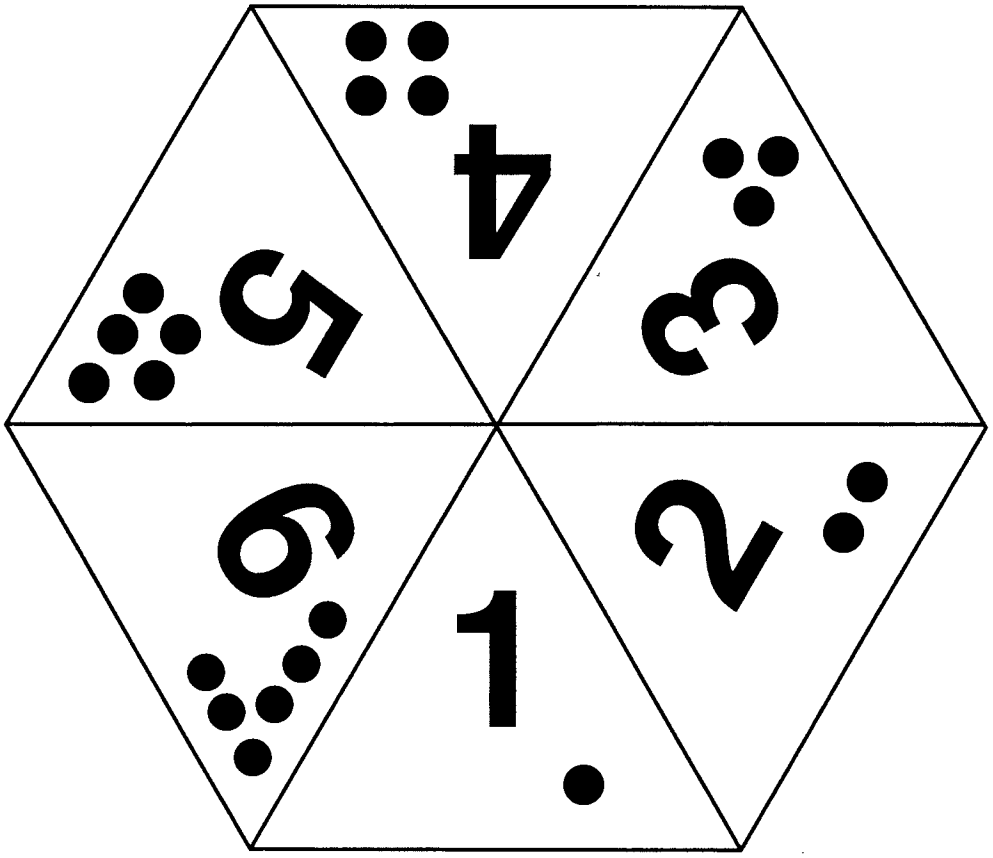
					
					
					
					
					
					

Shapes Race

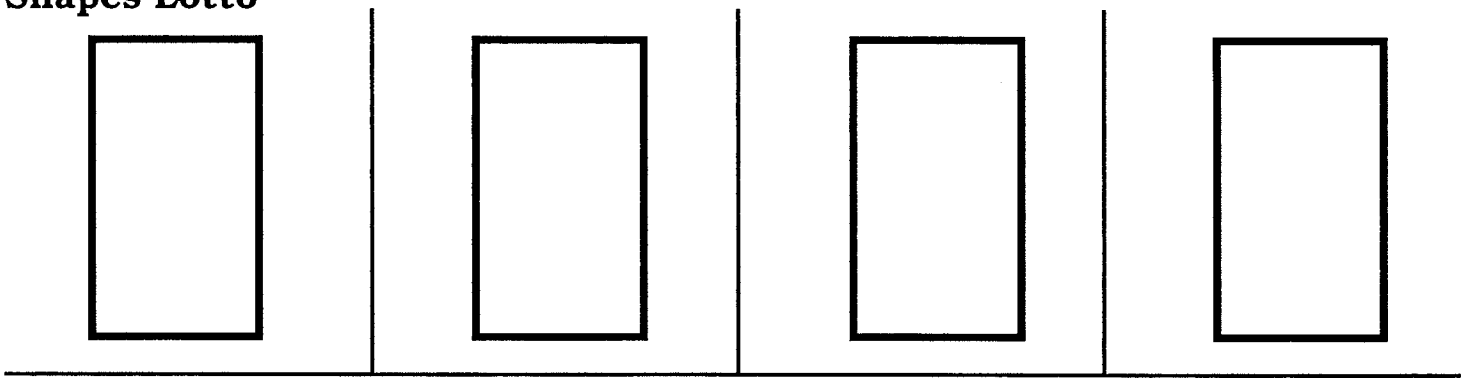


Spin and Count Double Spinner

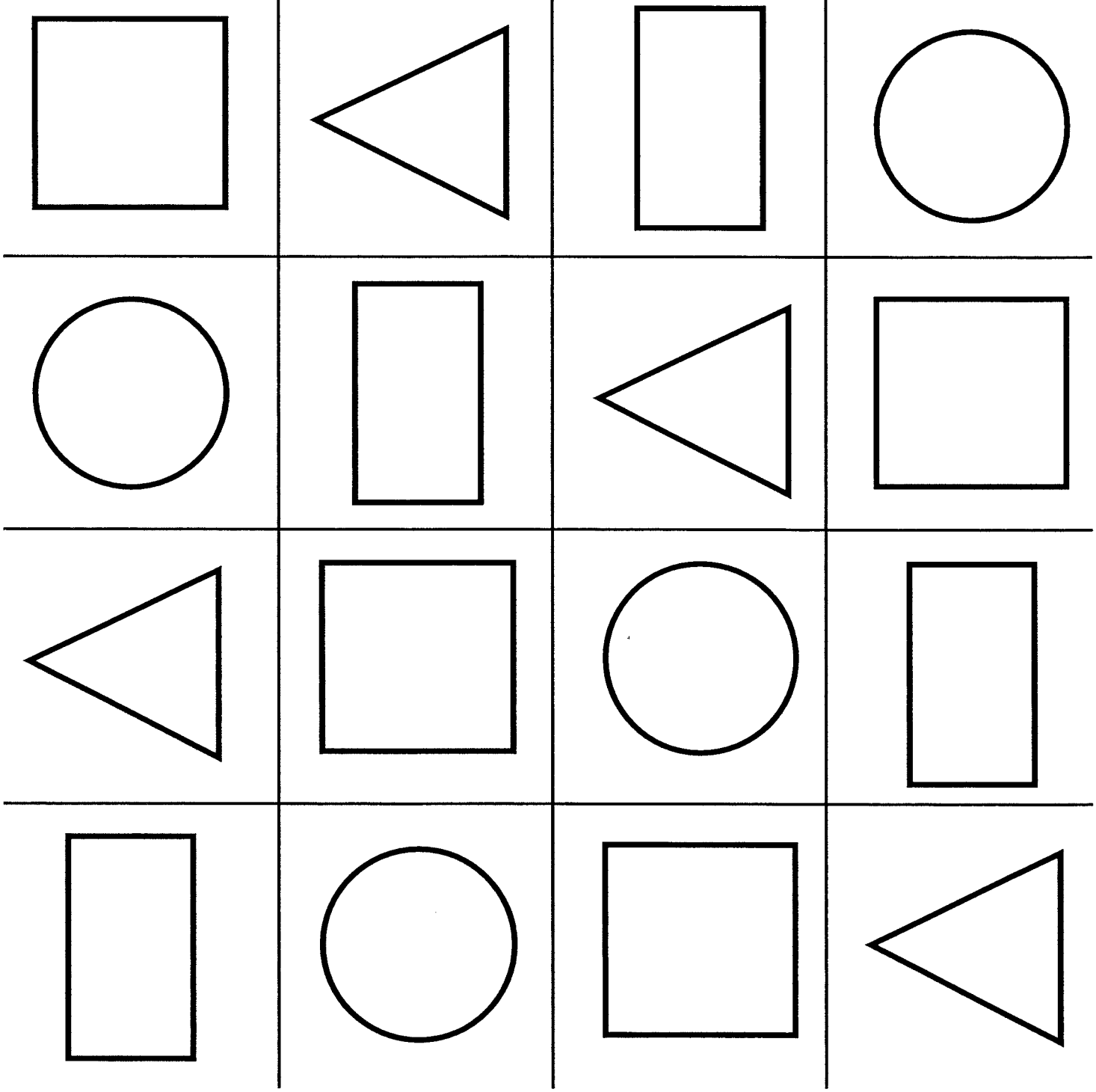




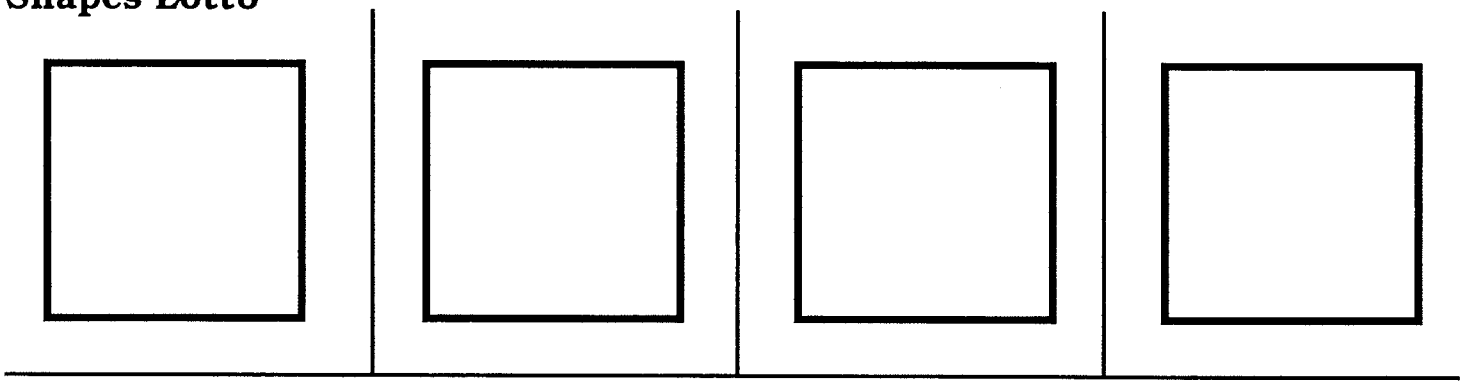
Shapes Lotto



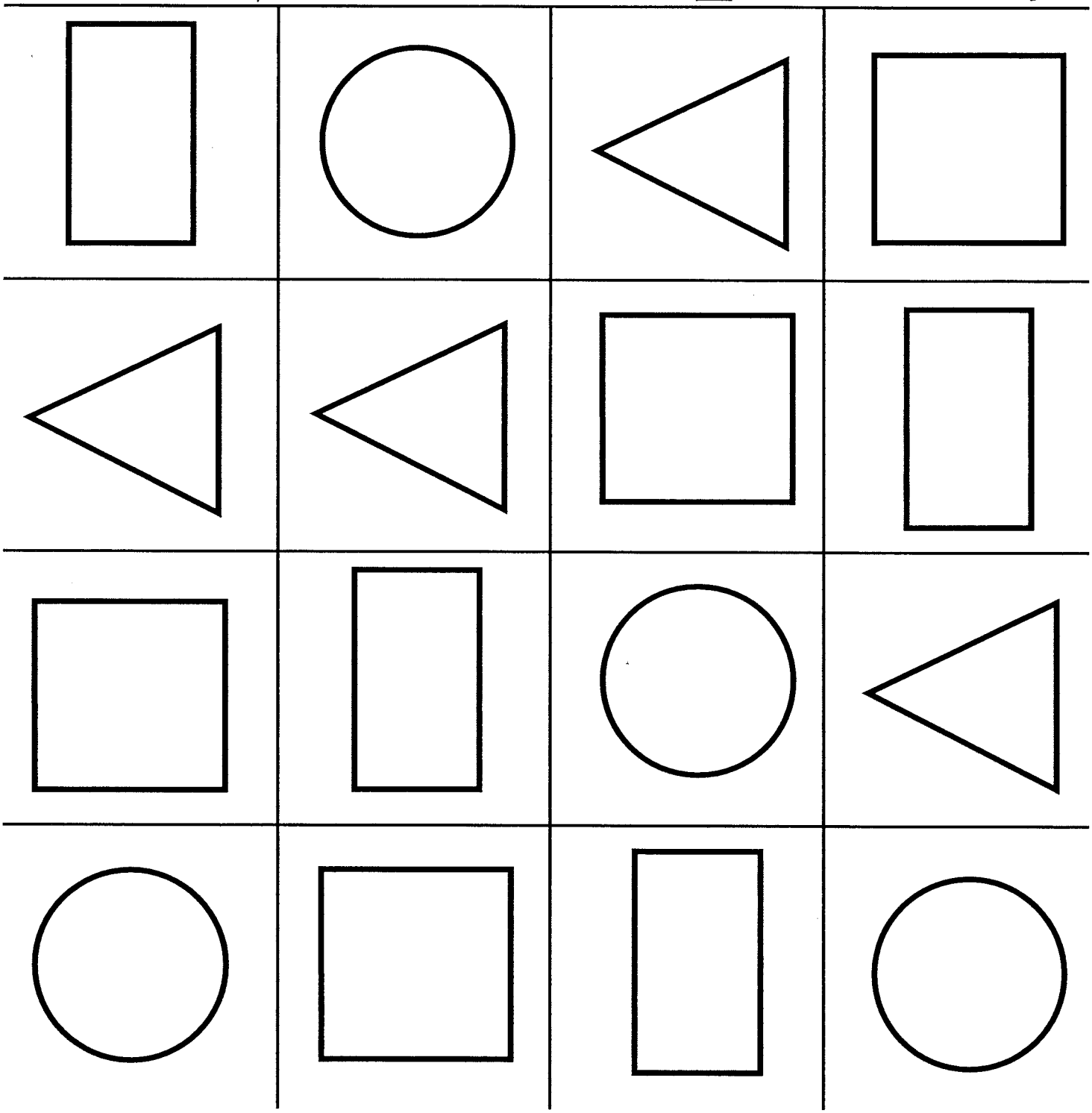
student Lotto board ▼ ▲ leader cards—cut into 4 parts



Shapes Lotto



student Lotto board ▼ ▲ leader cards—cut into 4 parts



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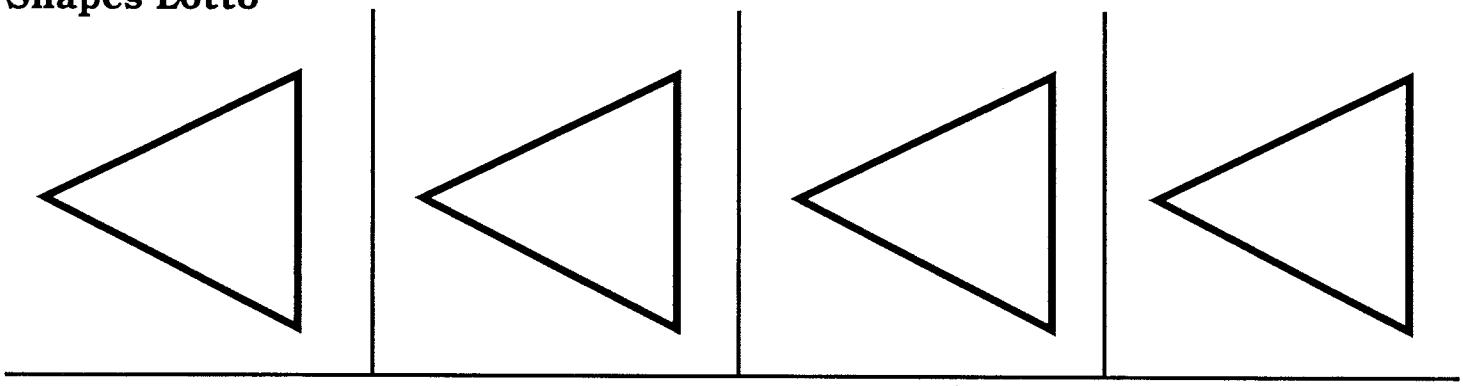
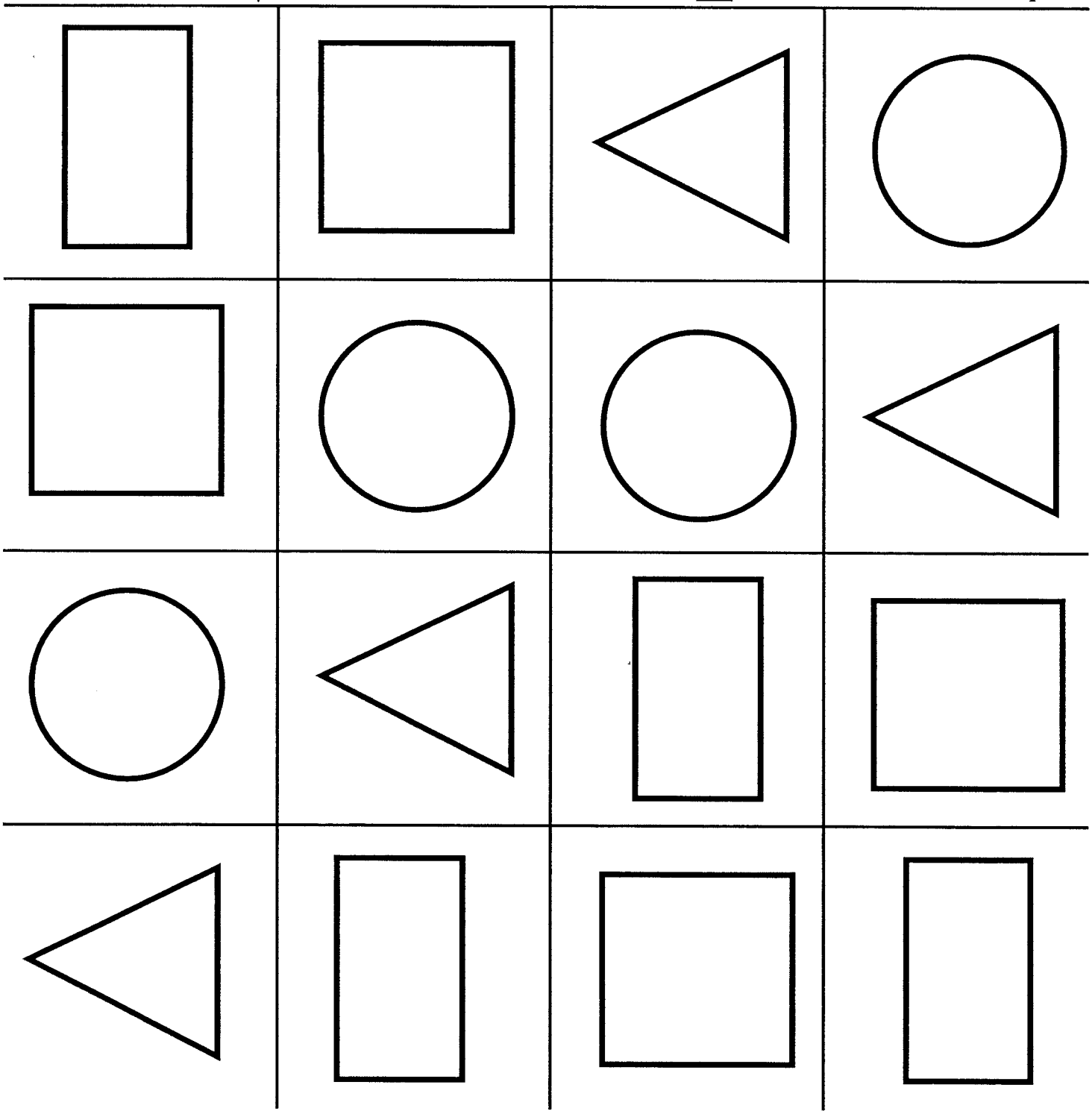
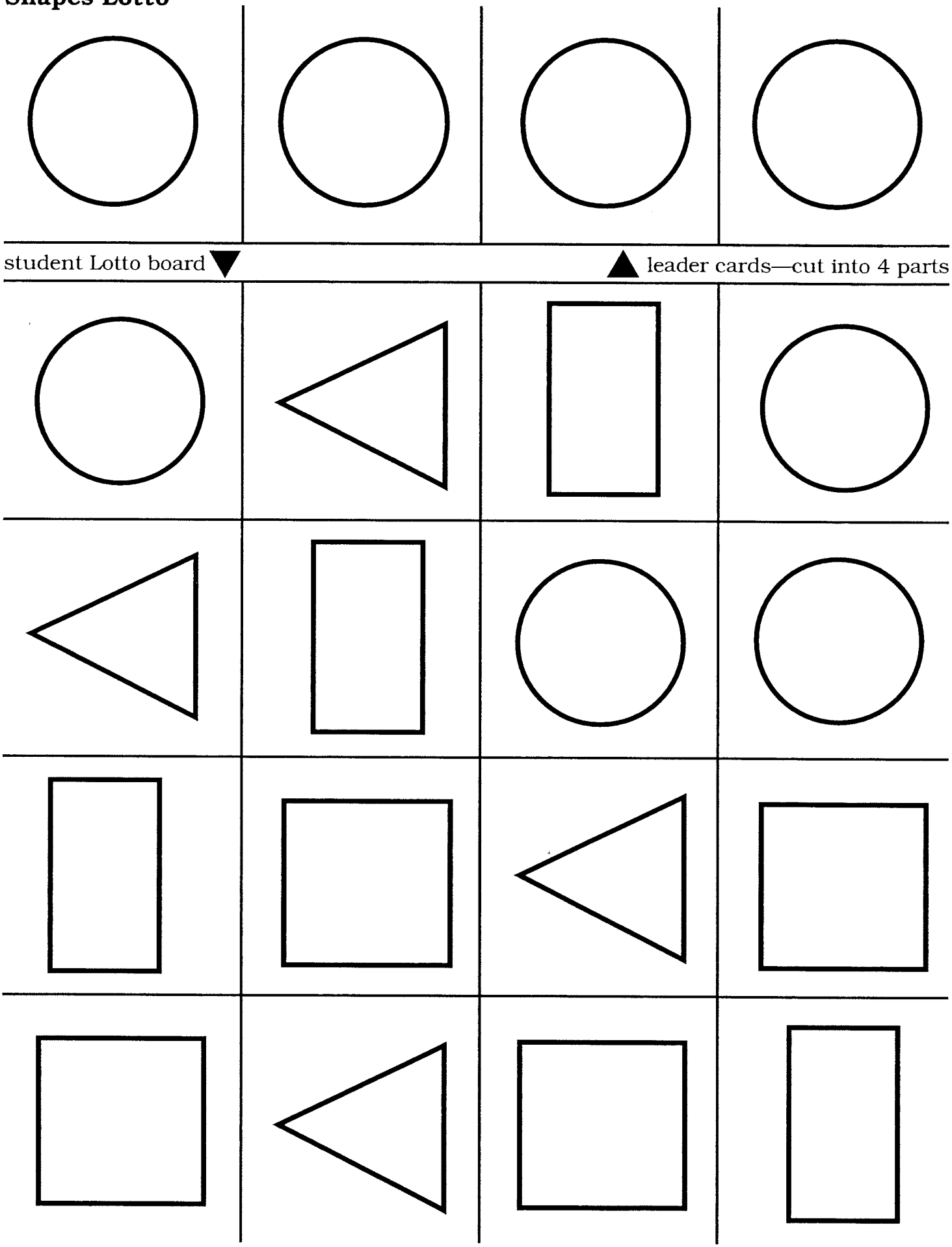


student Lotto board ▼ ▲ leader cards—cut into 4 parts

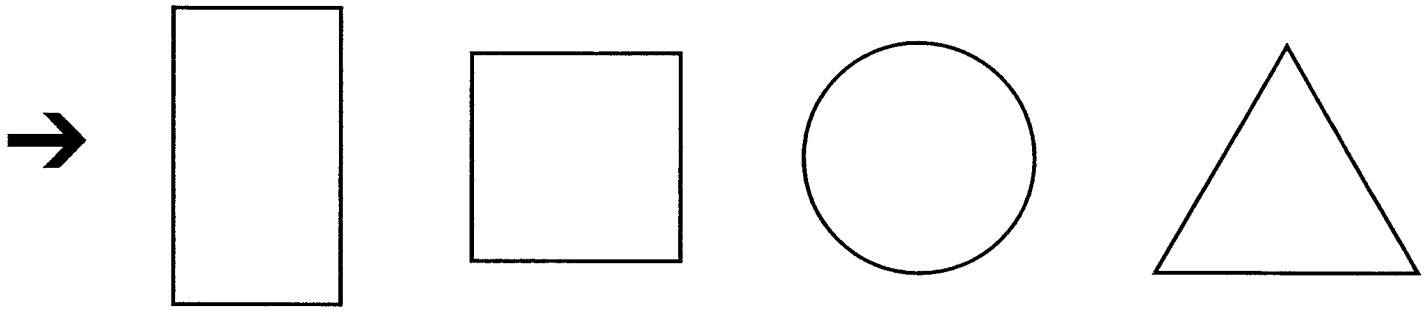


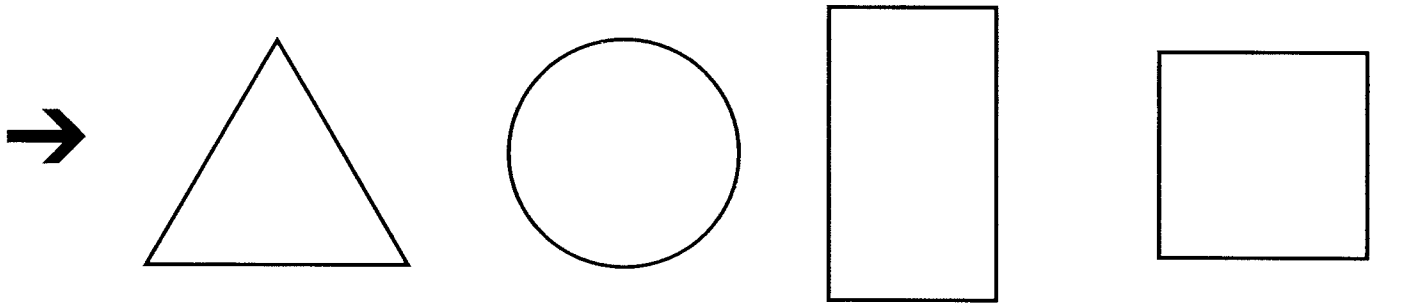
Shapes Lotto

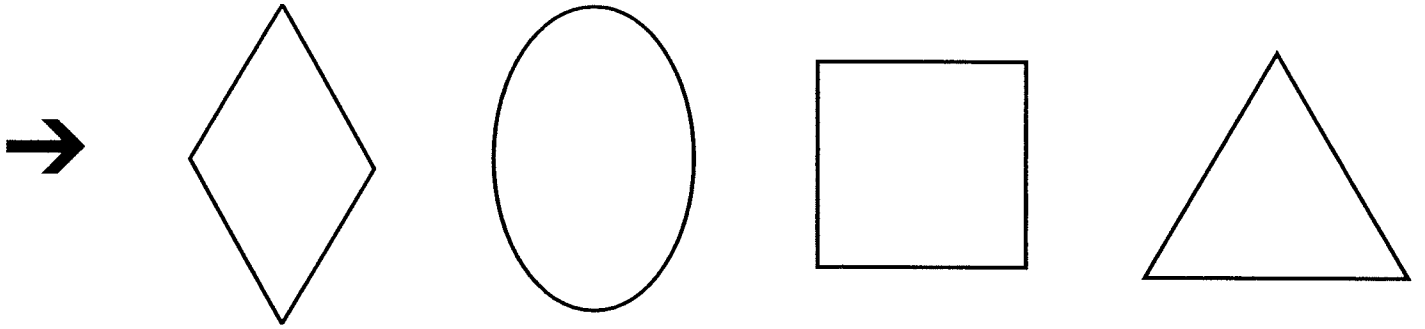


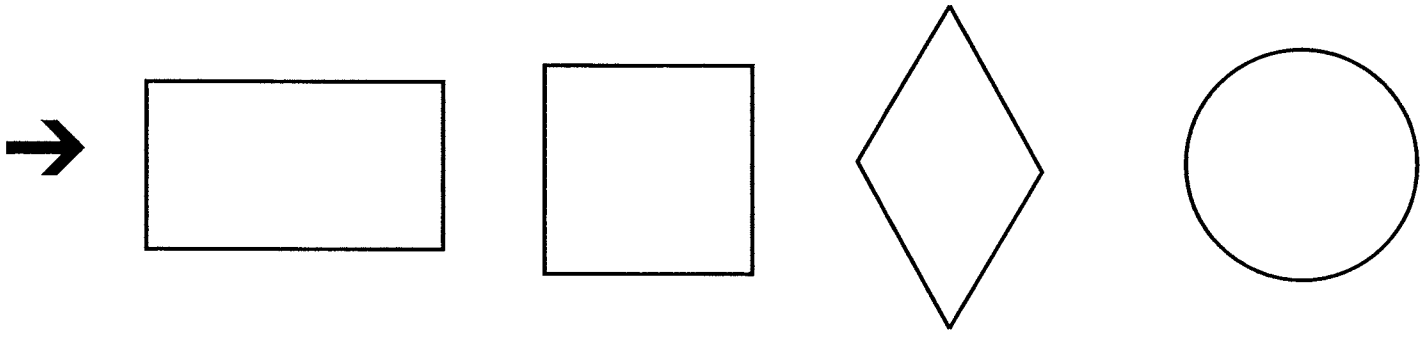
student Lotto board ▼ ▲ leader cards—cut into 4 parts

Shapes Mat Memory Cards

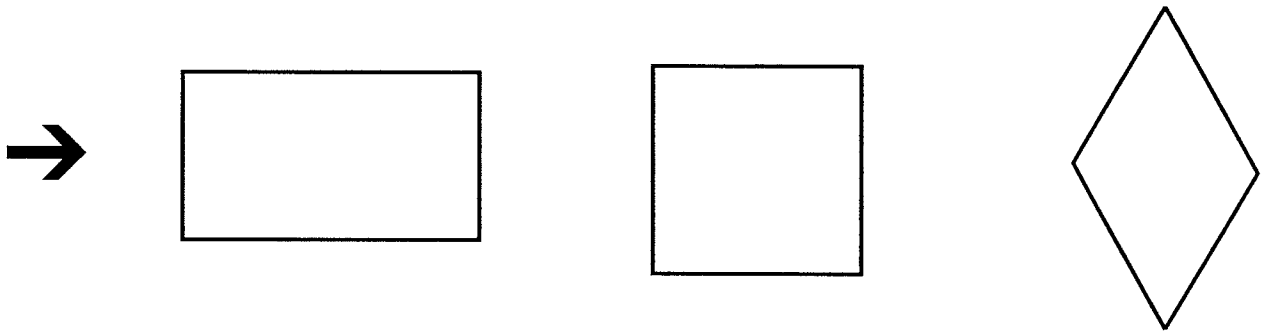


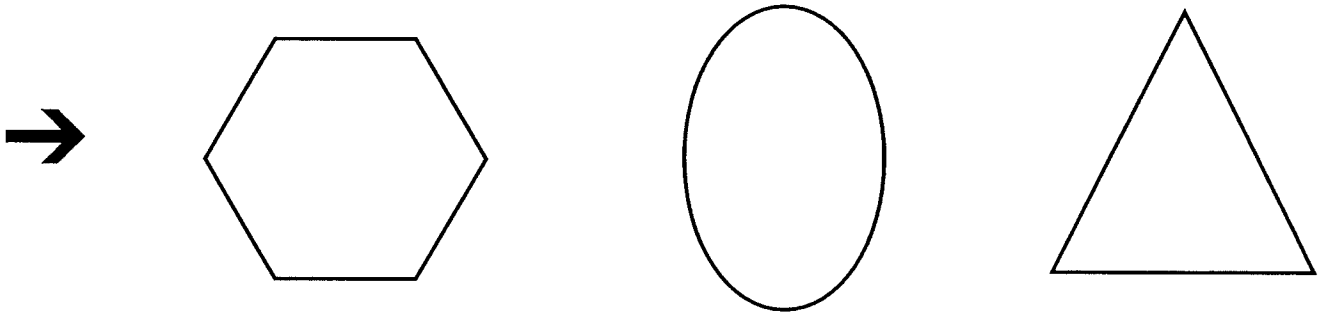


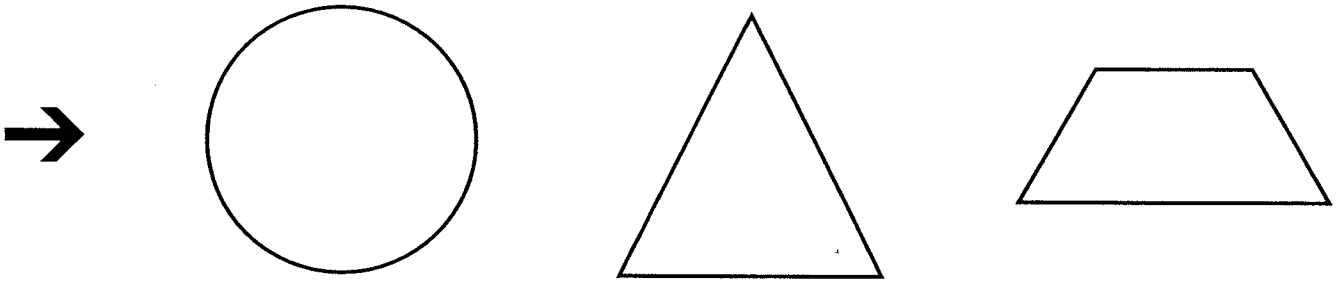


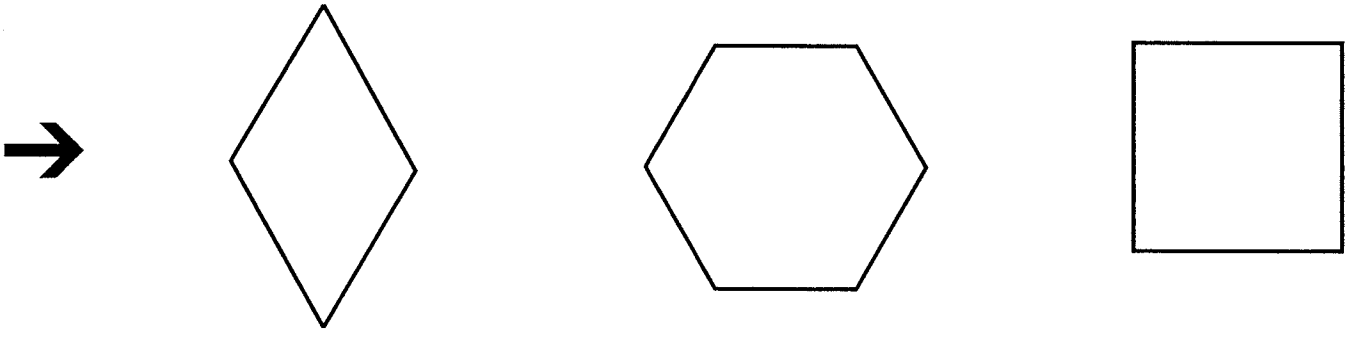


Shapes Mat Memory Cards

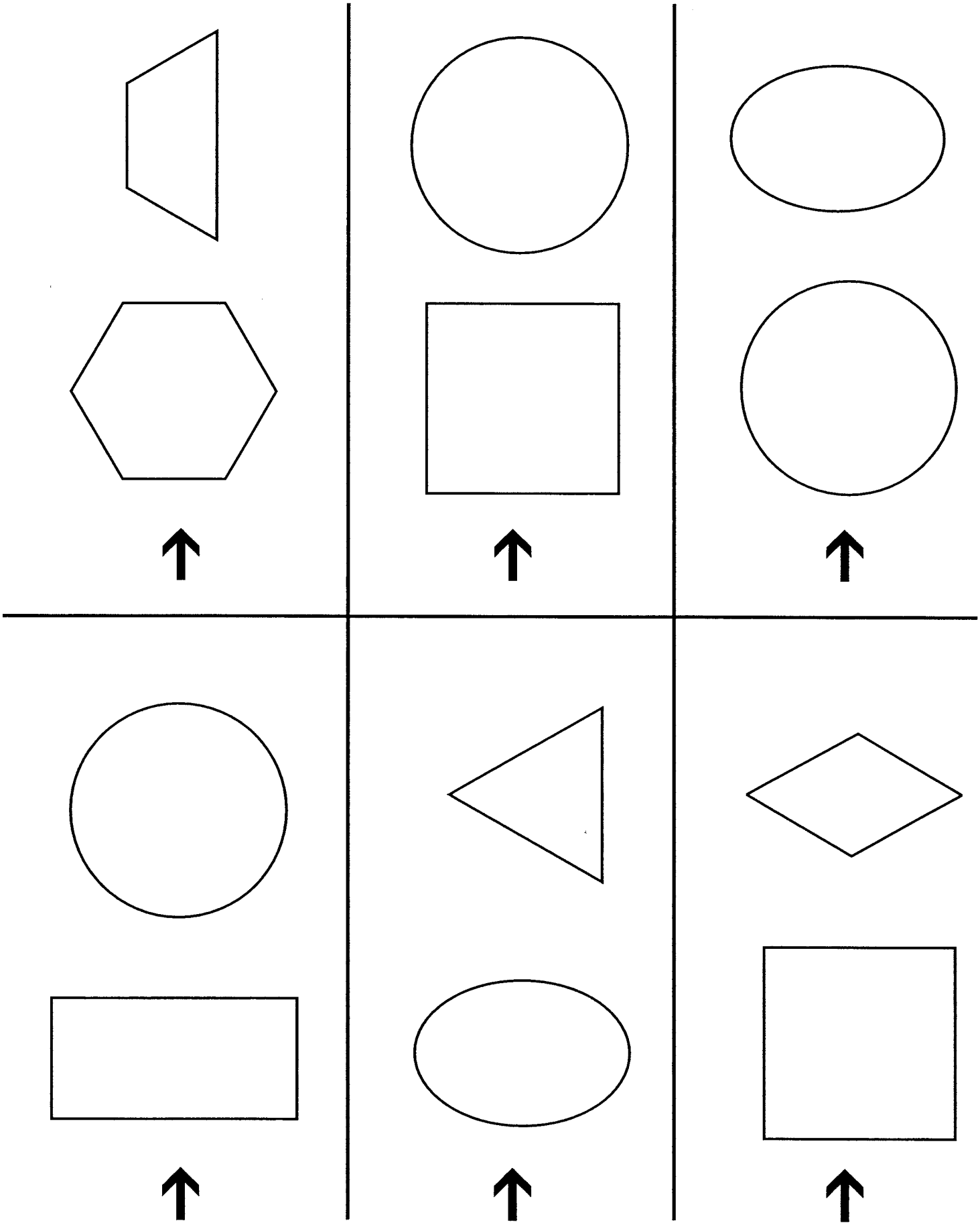








Shapes Mat Memory Cards



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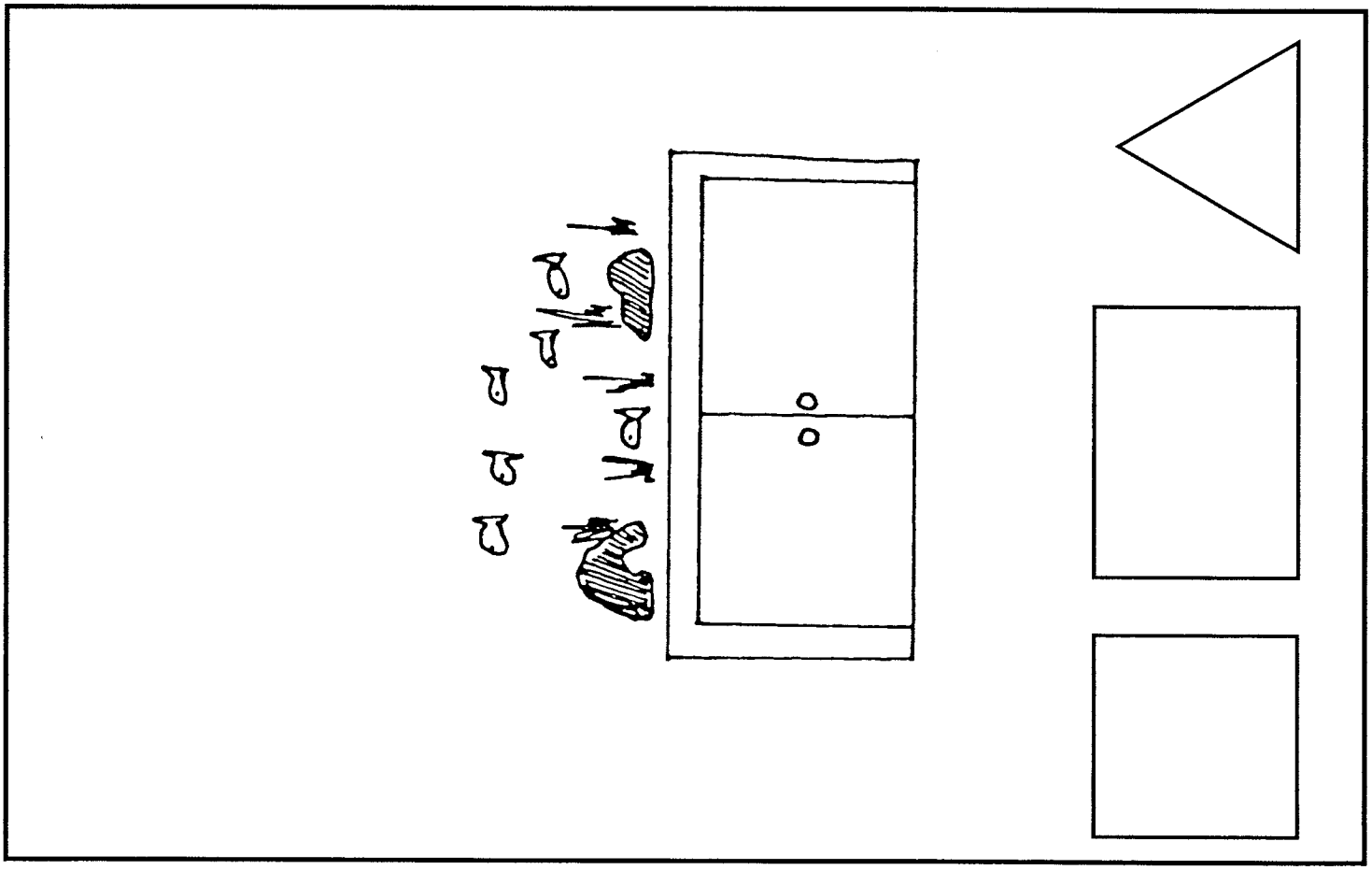

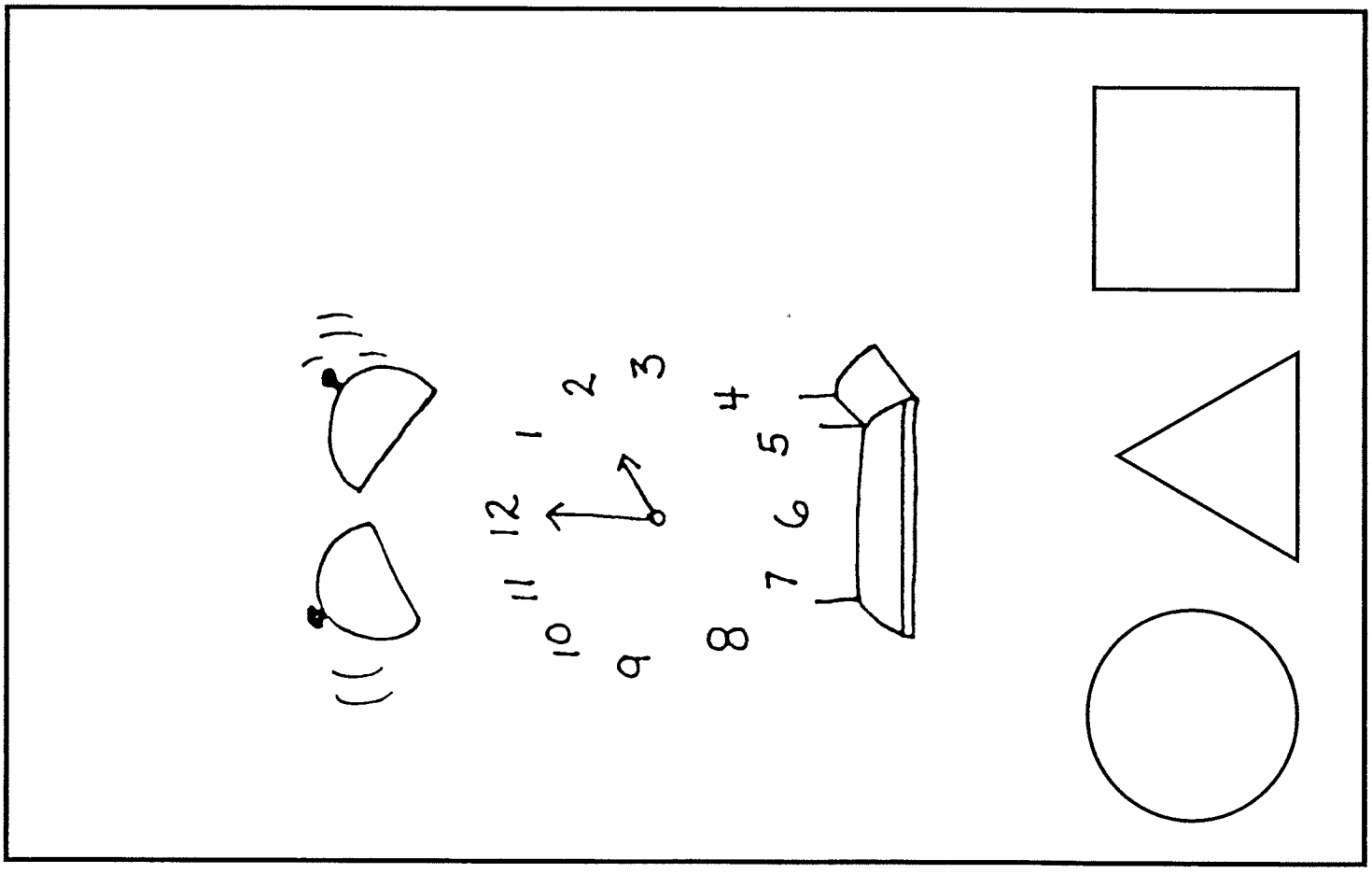

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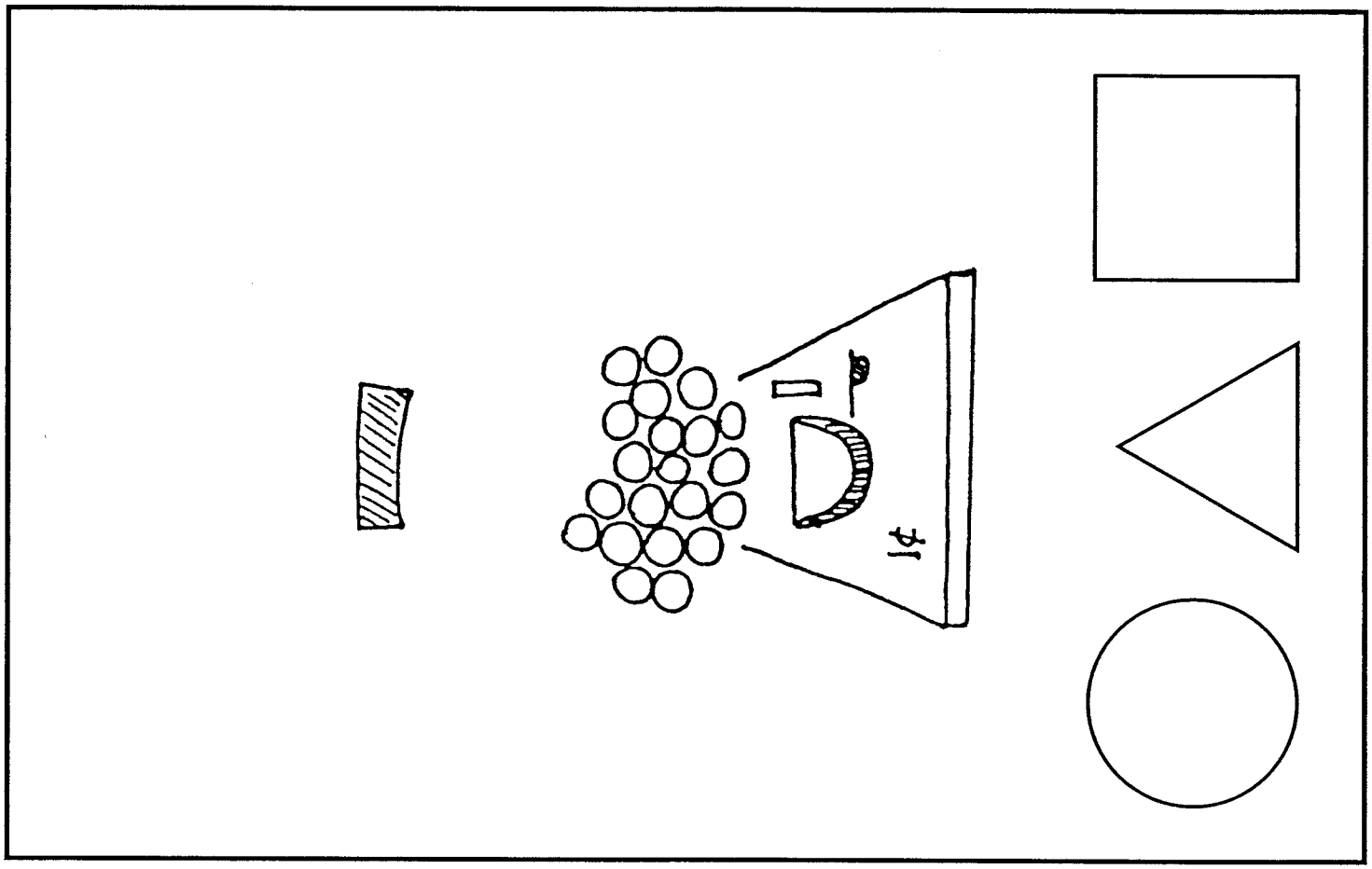

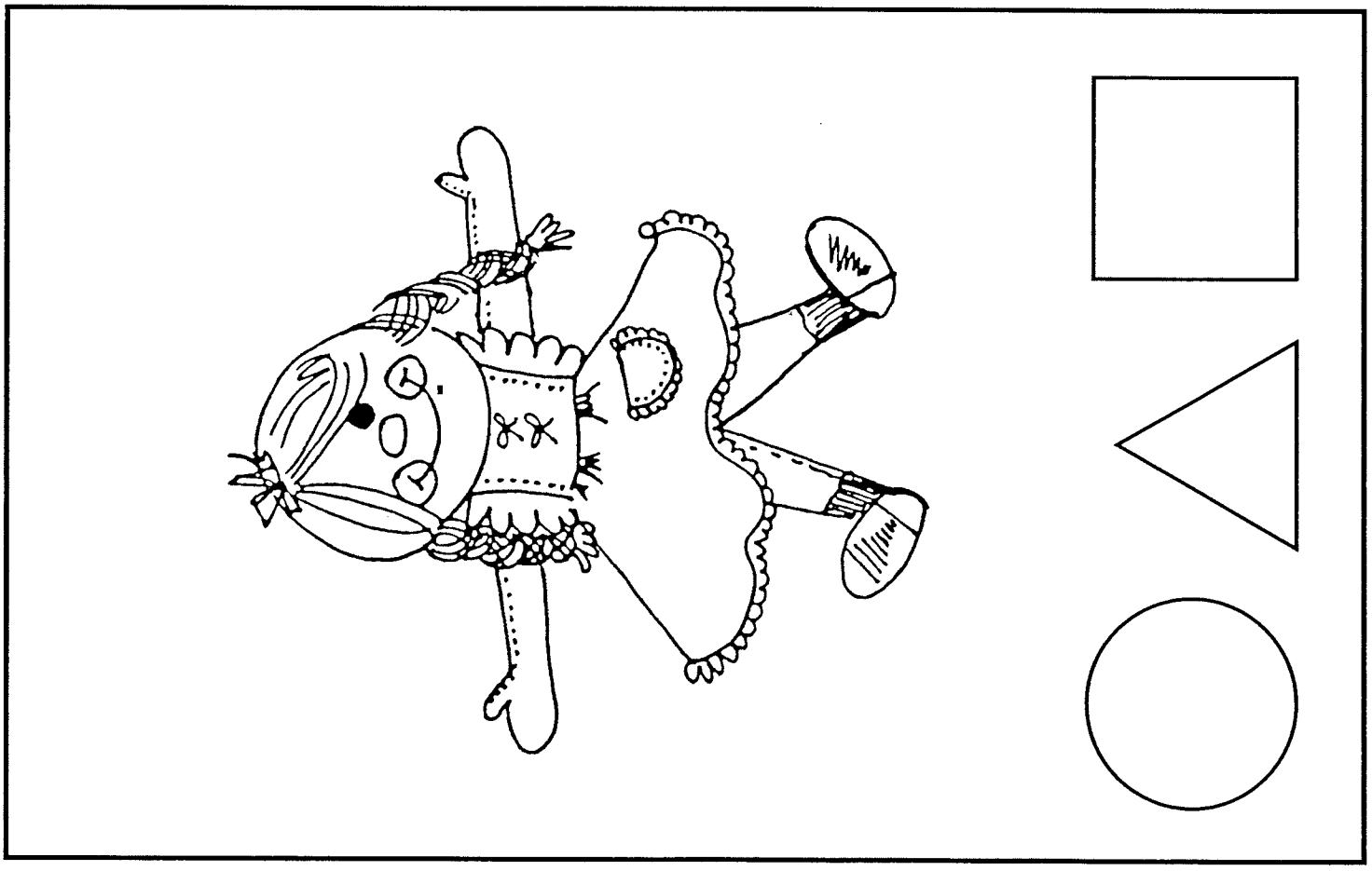

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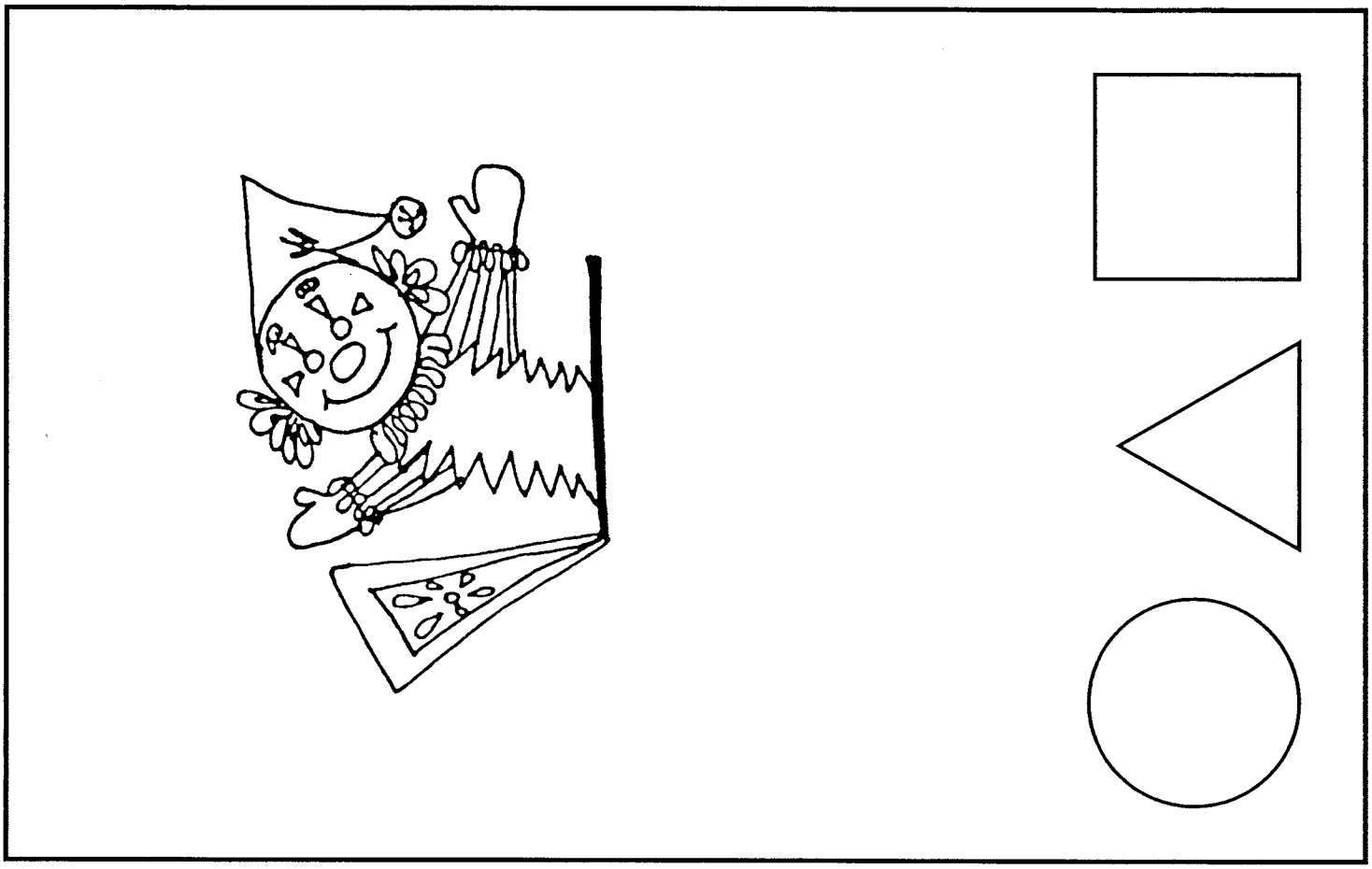

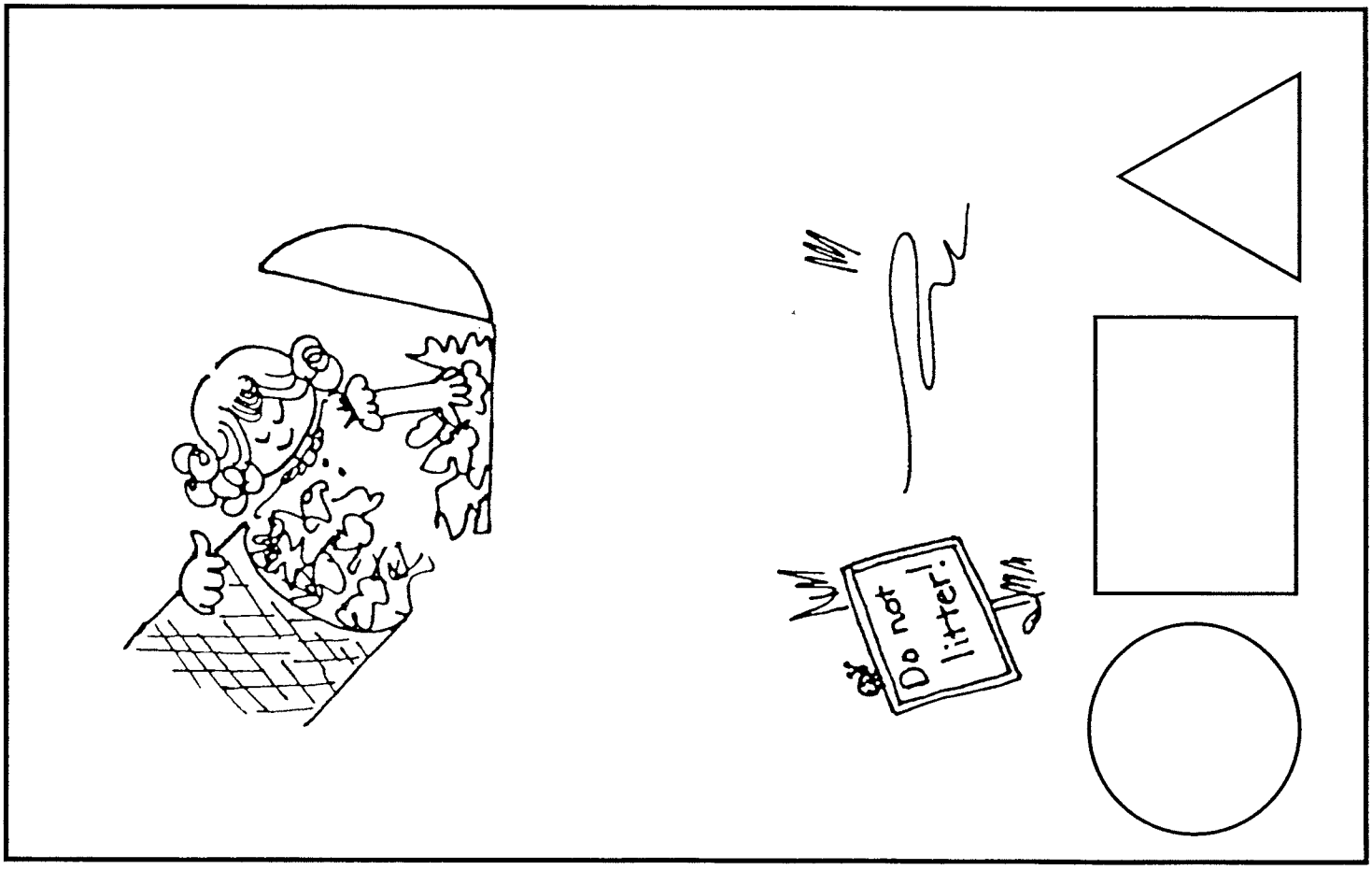

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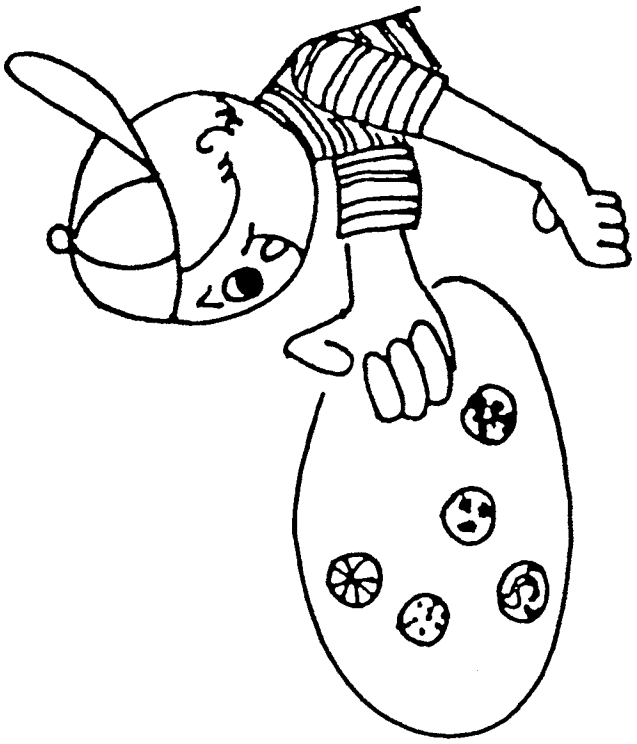

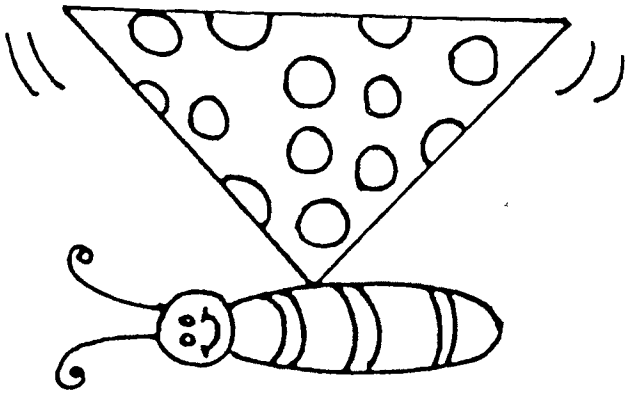

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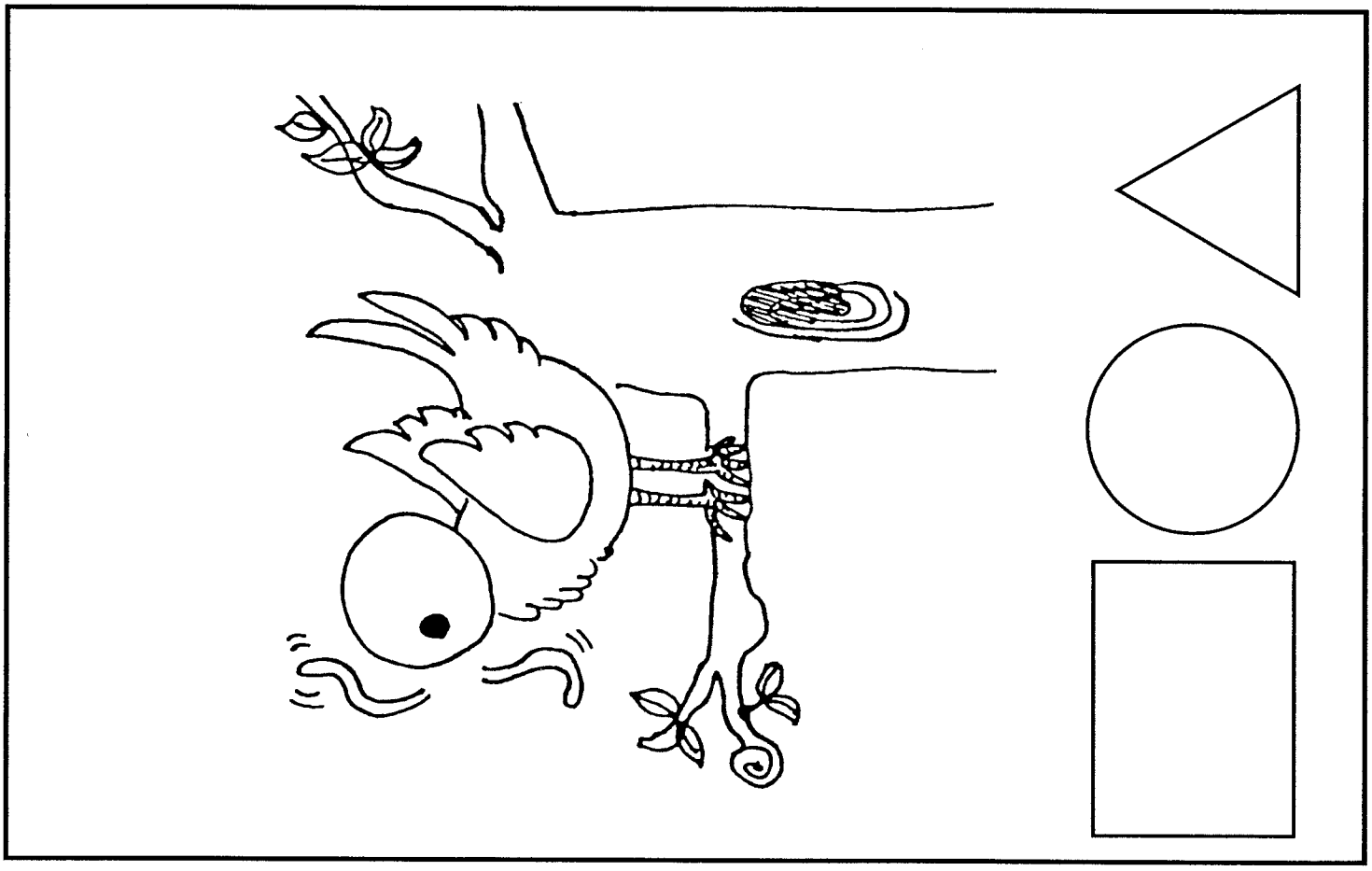

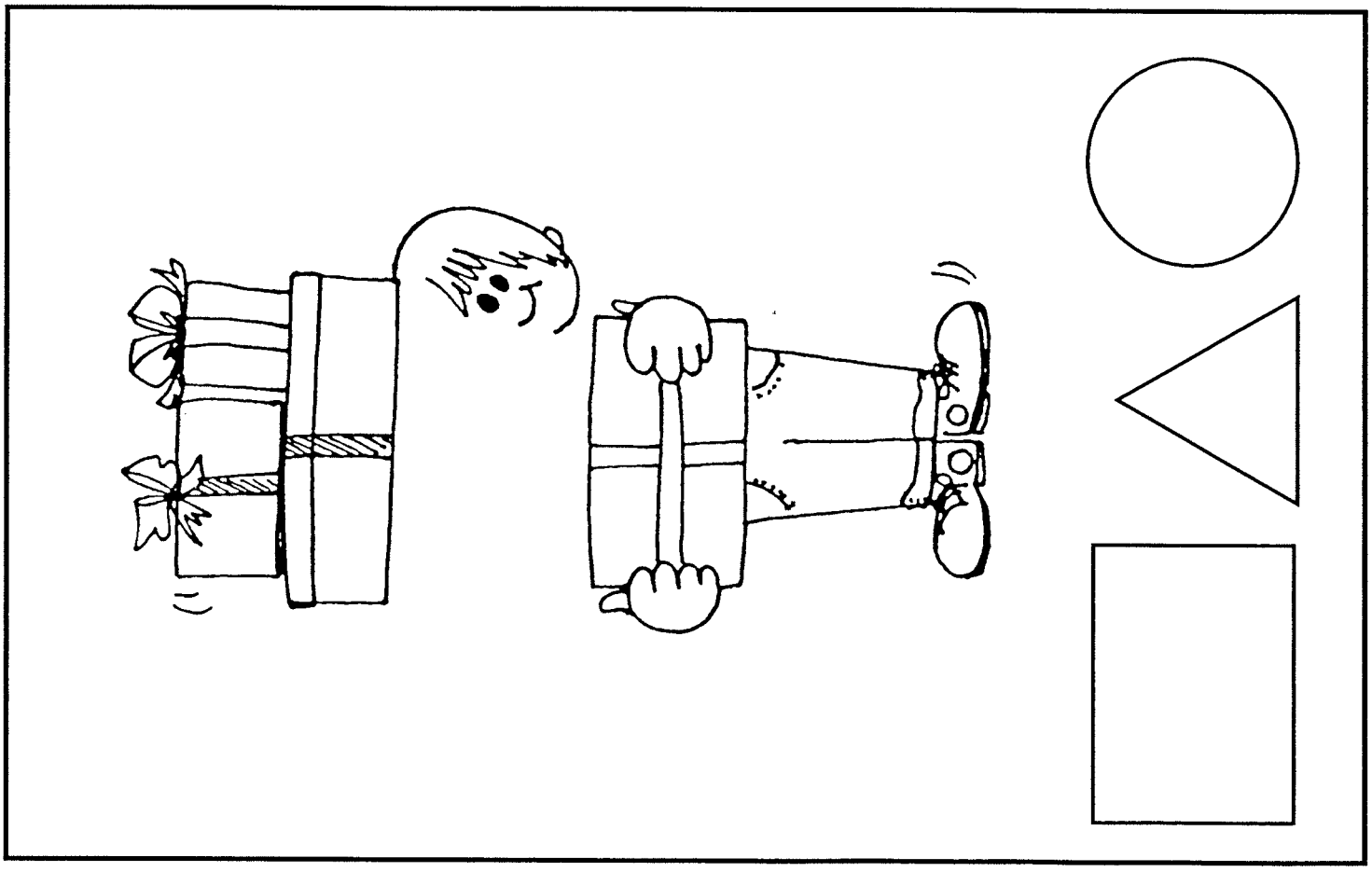

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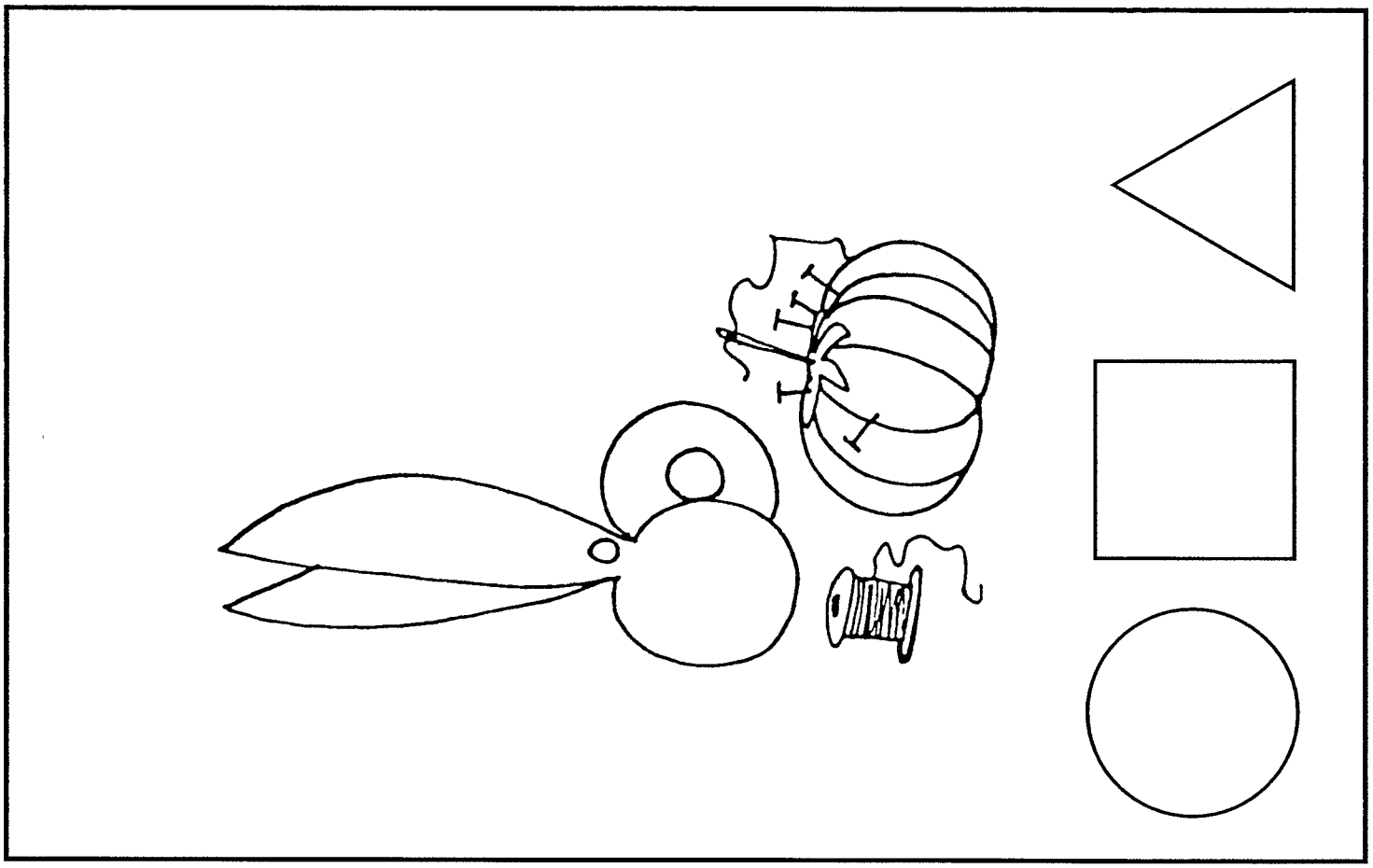
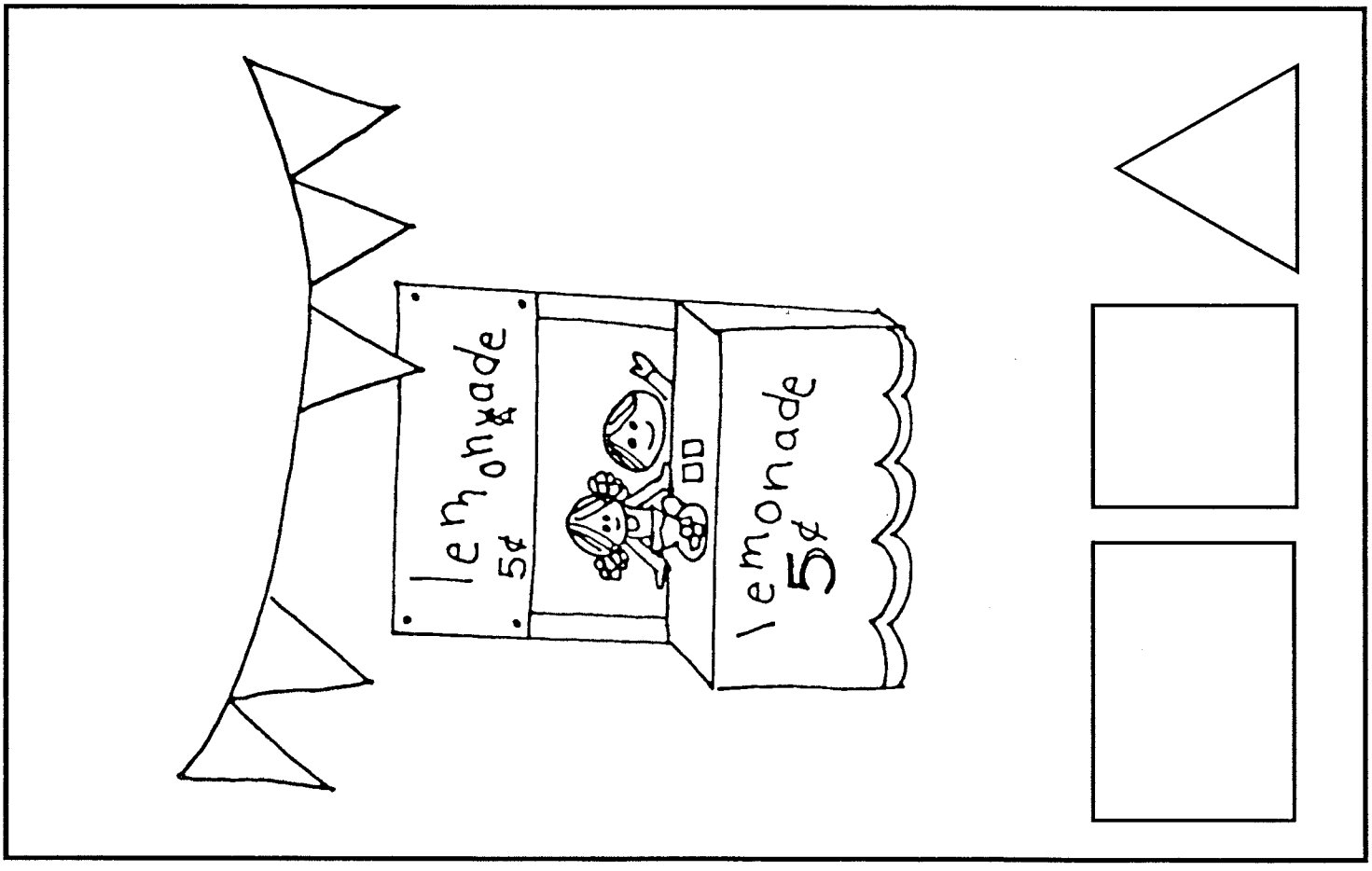
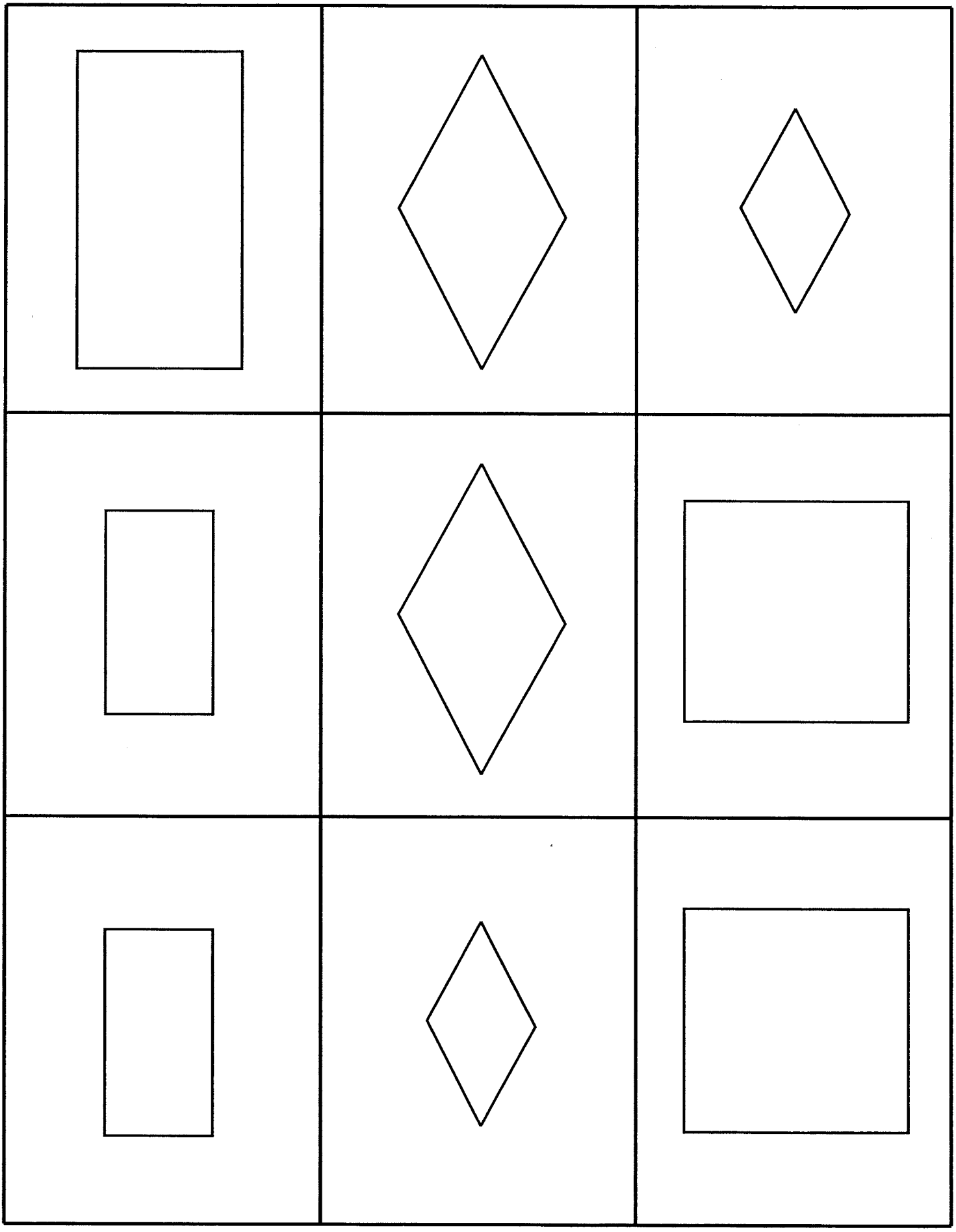




Rotten Rectangle



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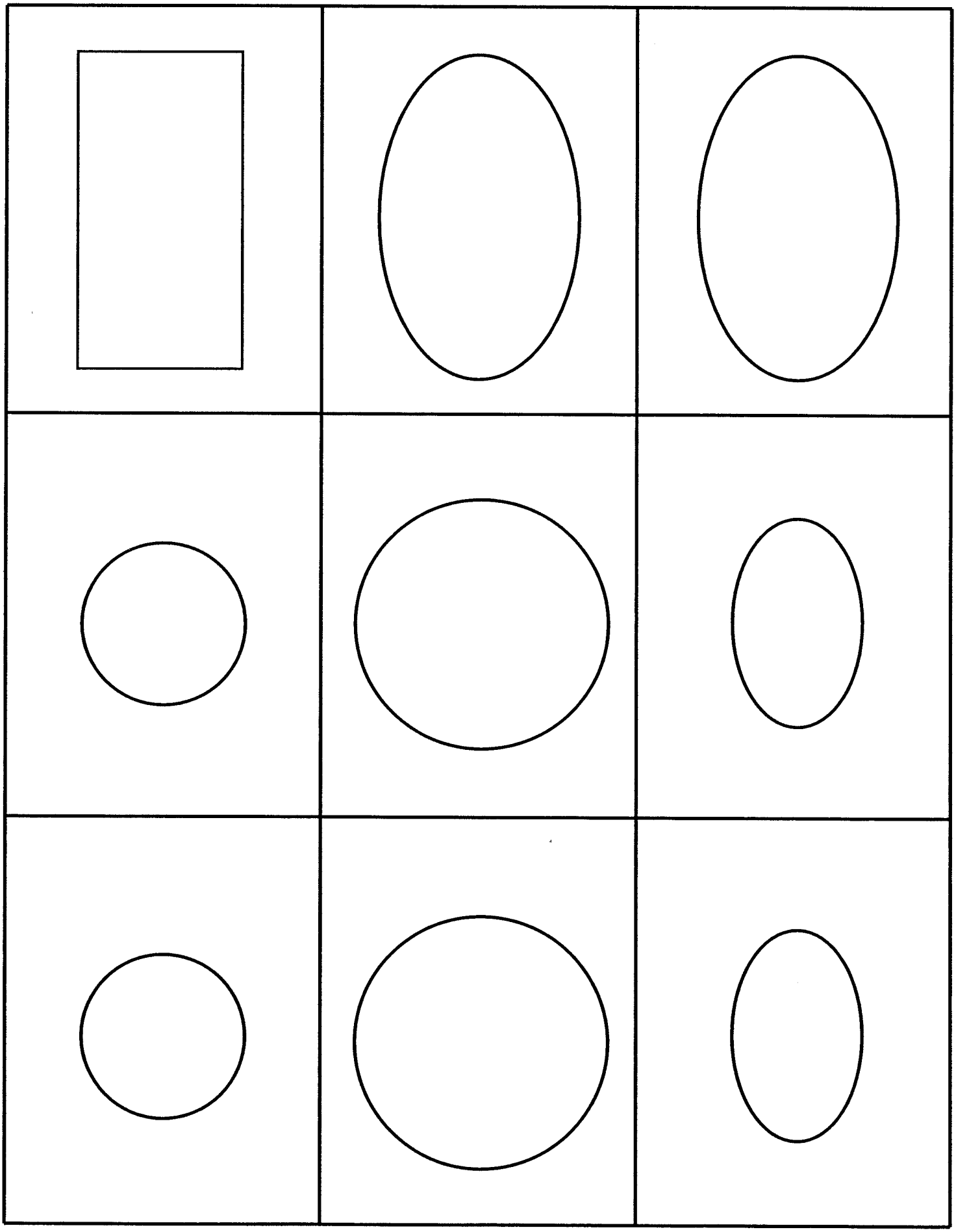
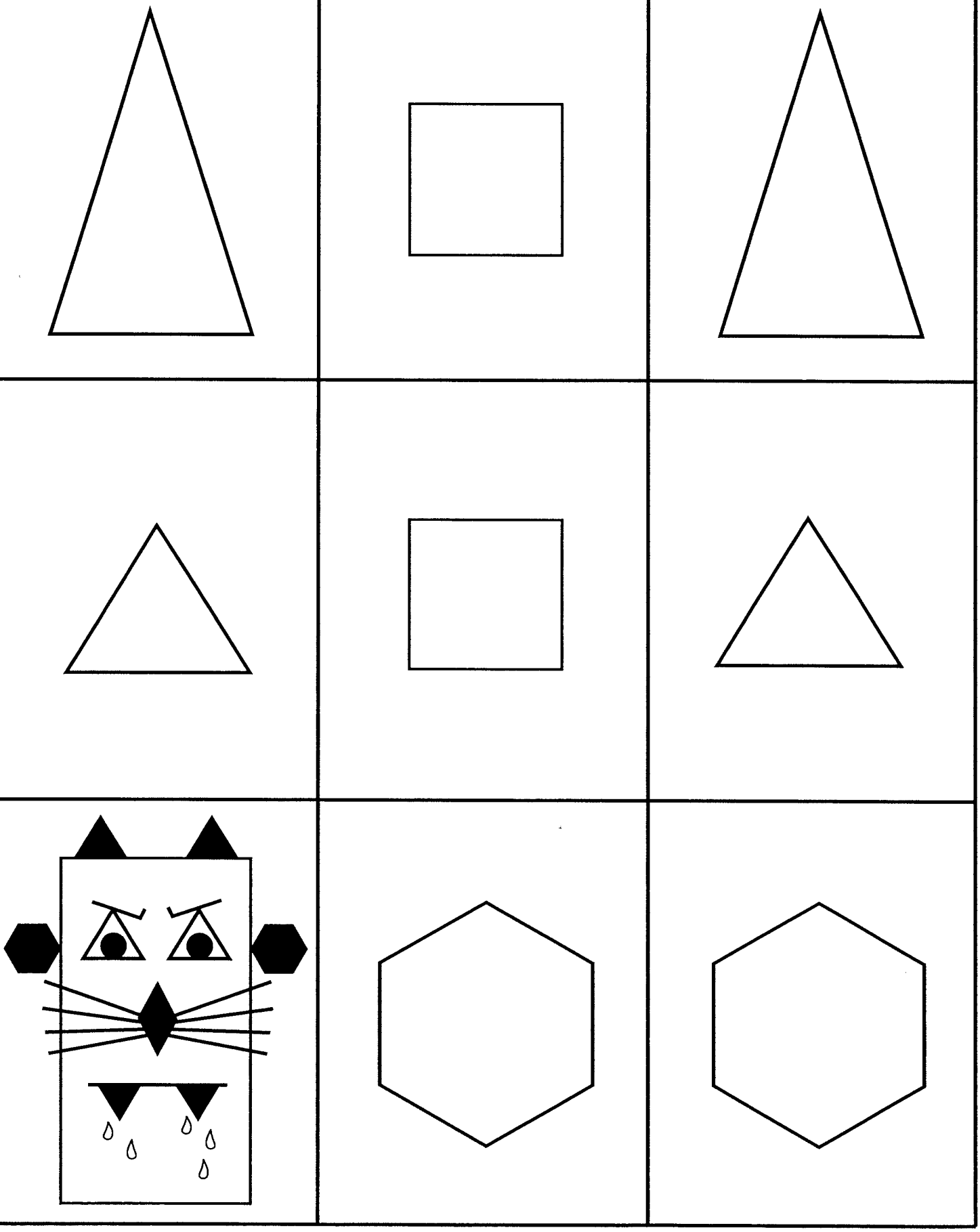
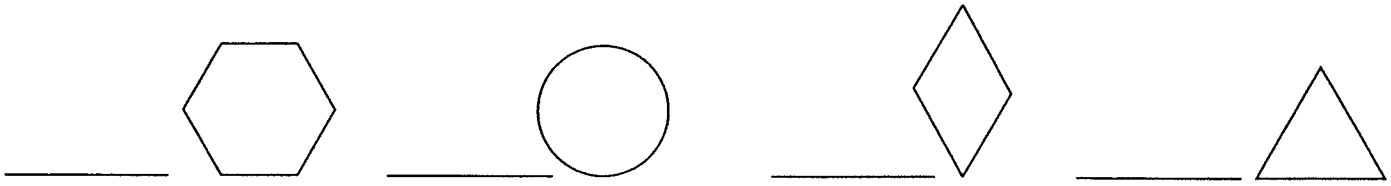


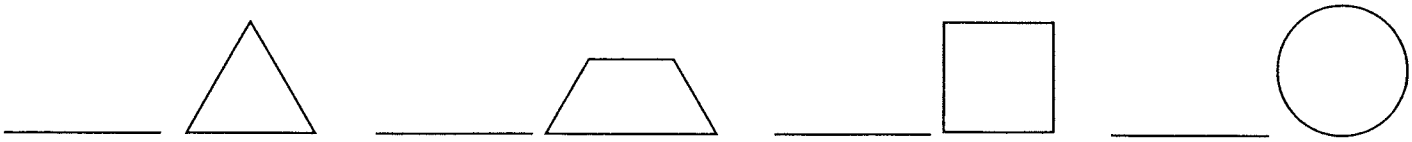
Rotten Rectangle



Shapes Search



Shapes Search



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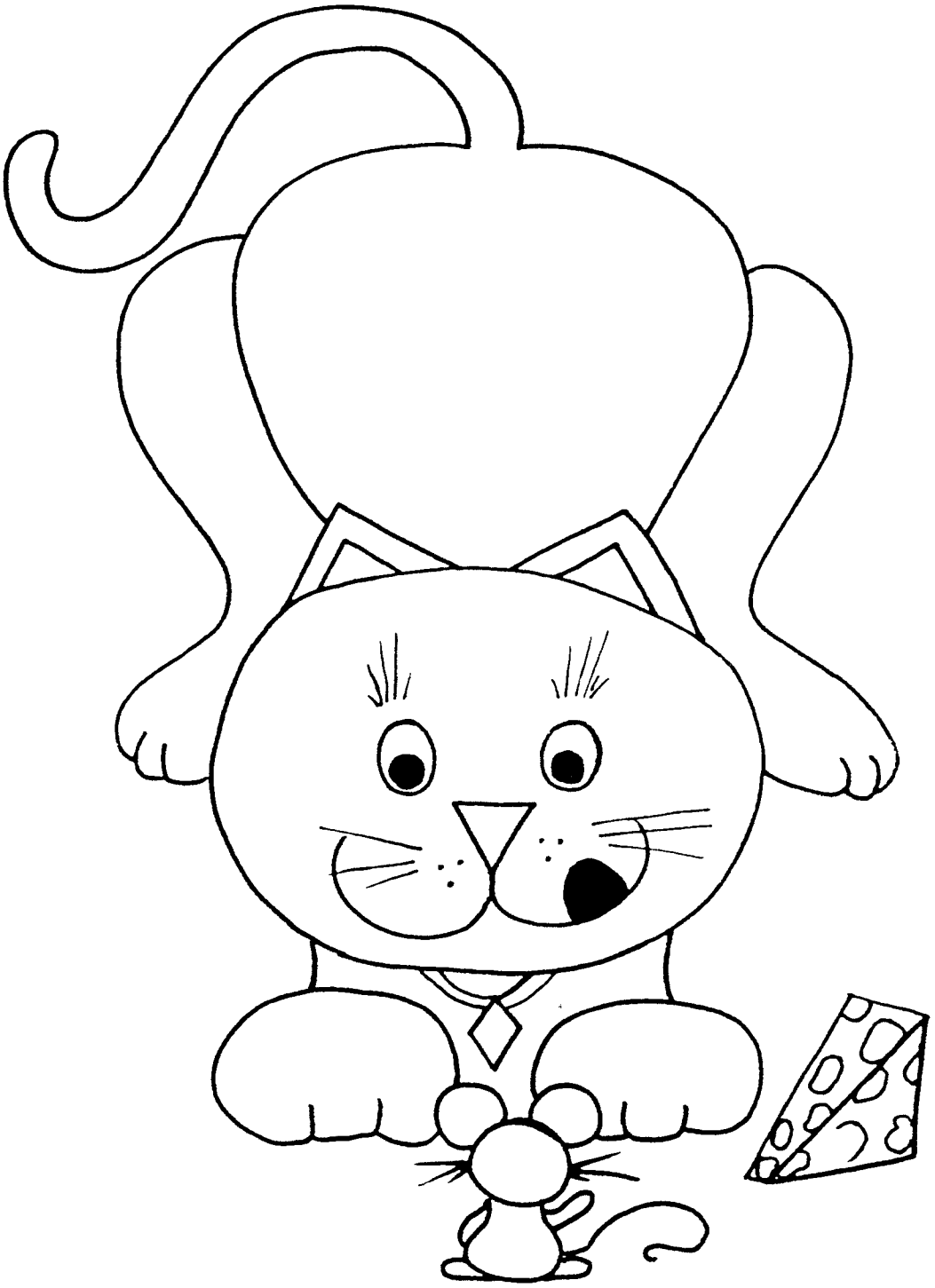

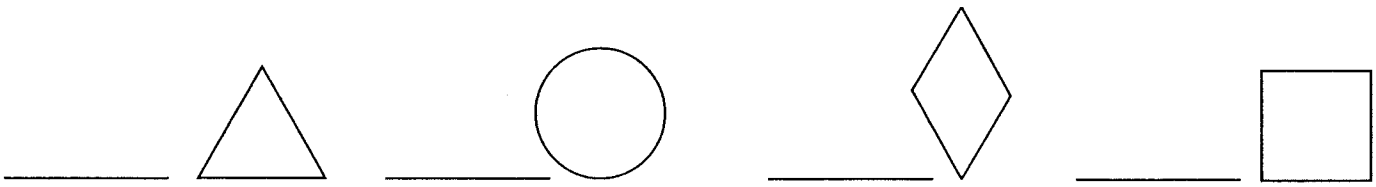

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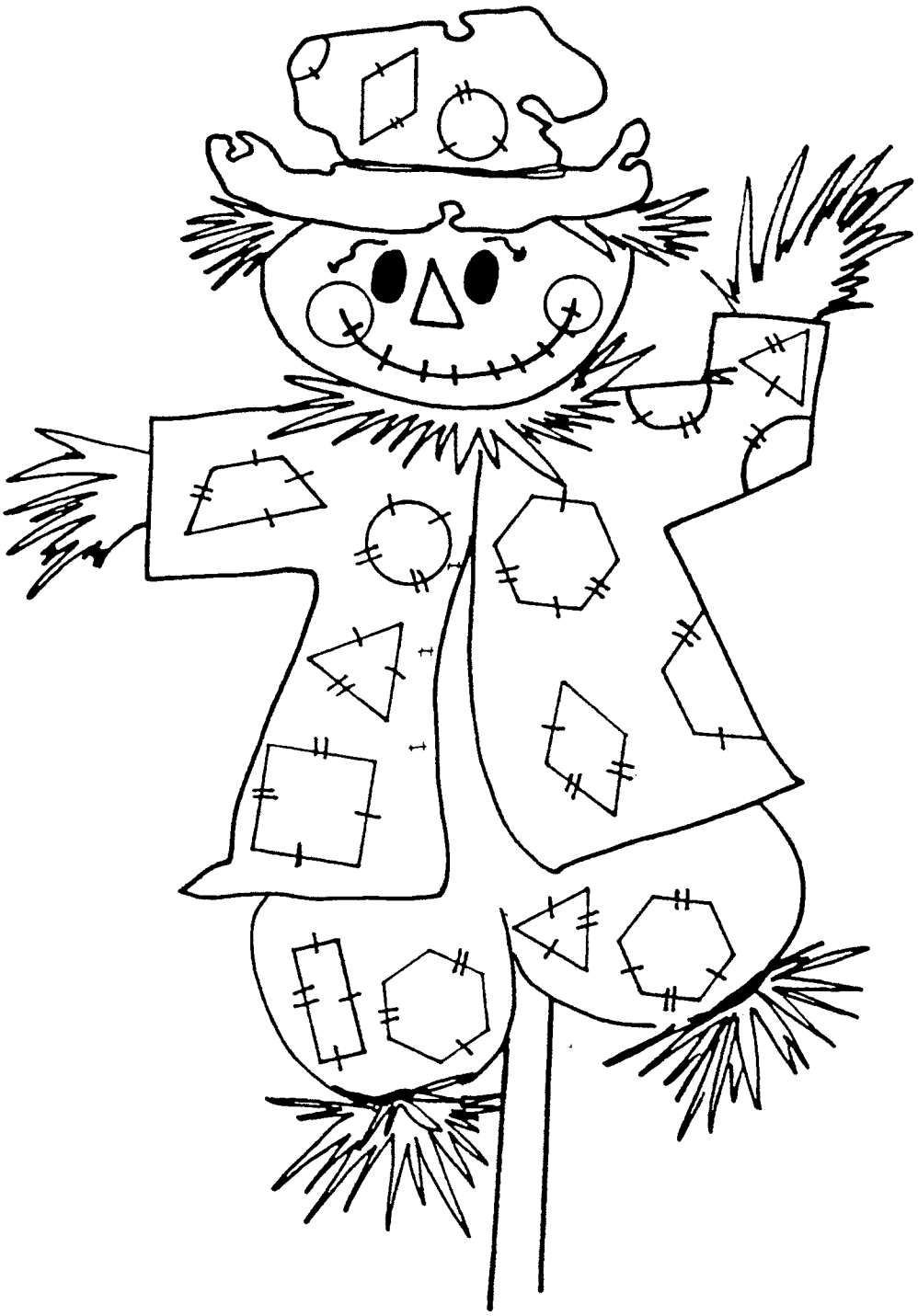

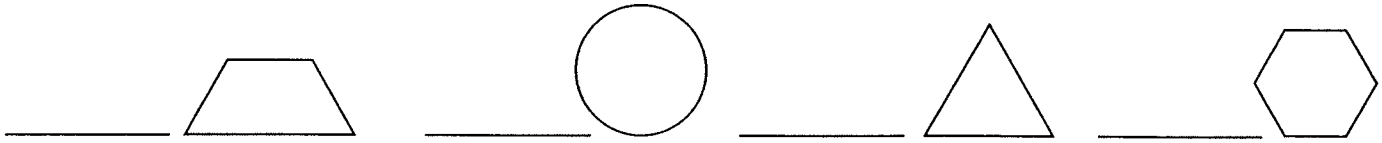

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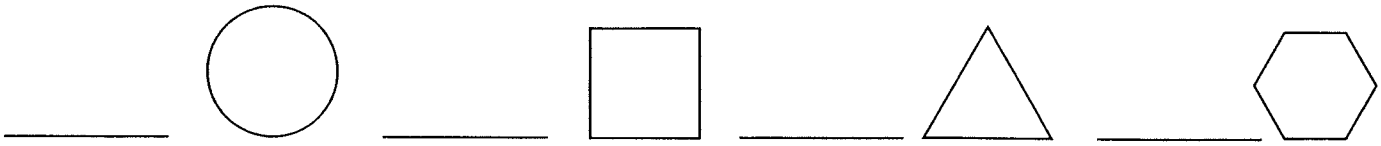
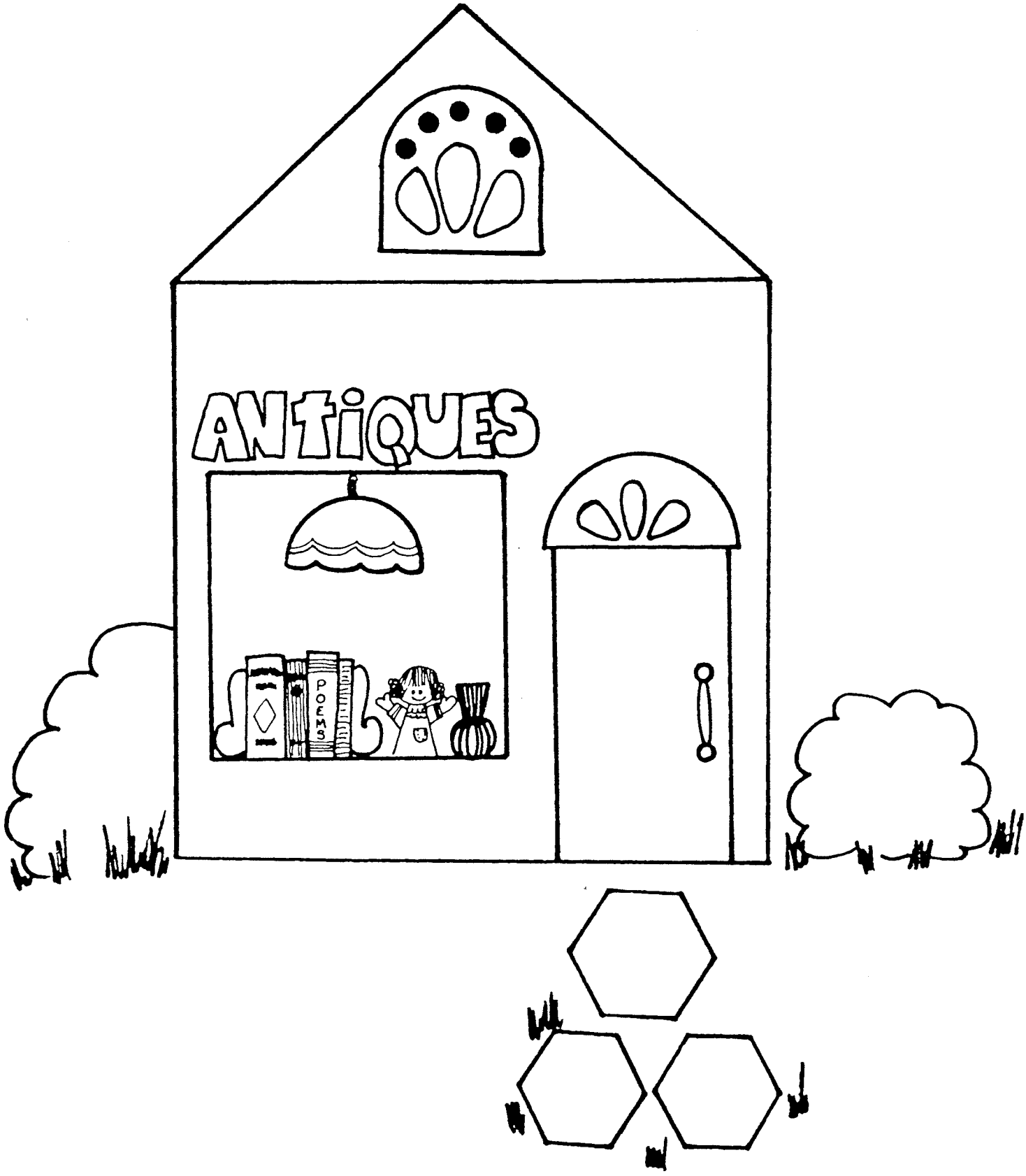
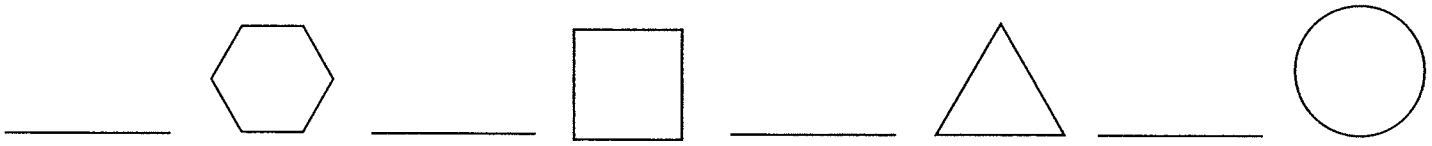


Shapes Search

Shapes Search





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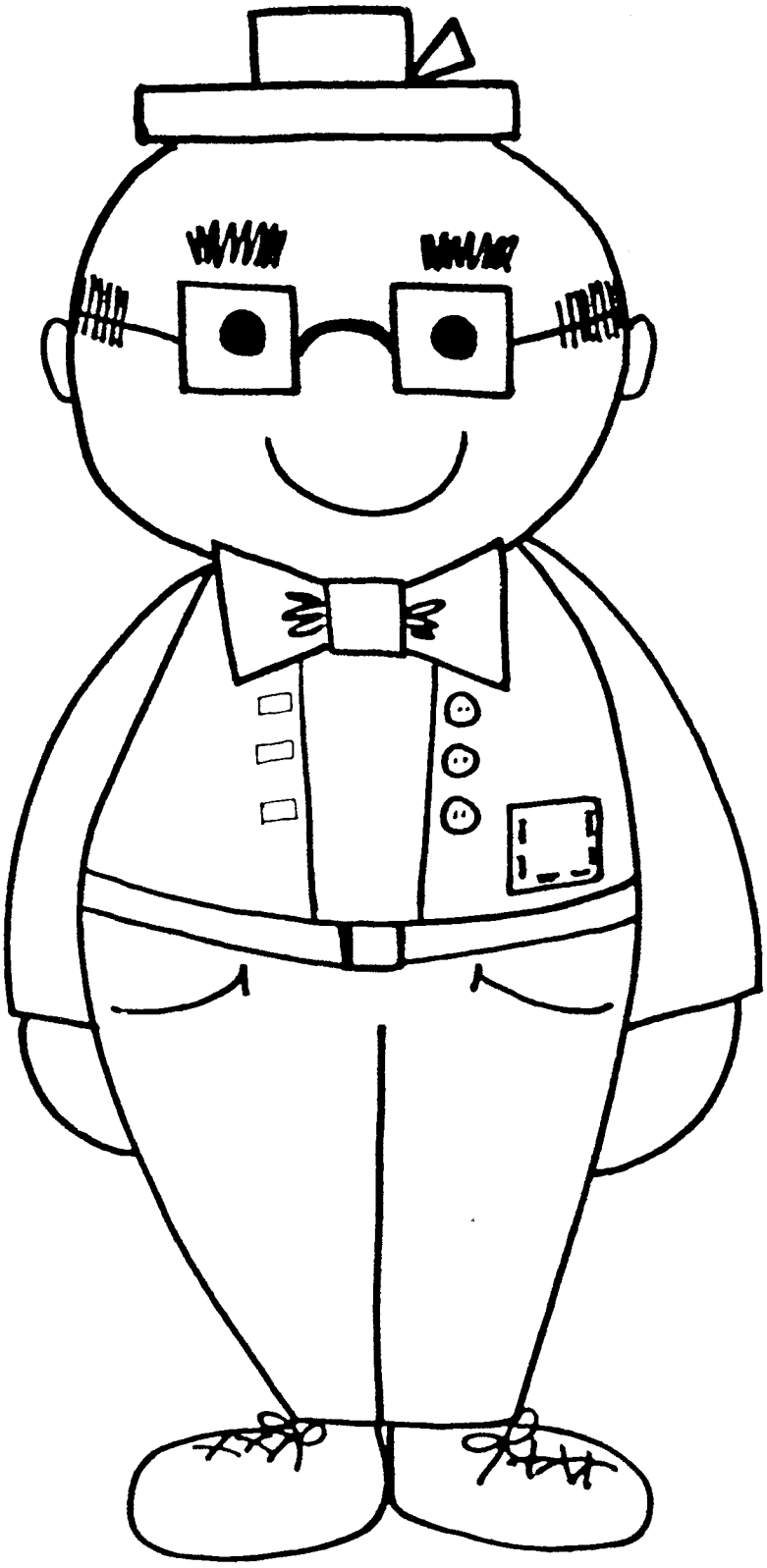

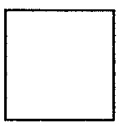

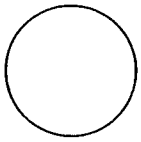

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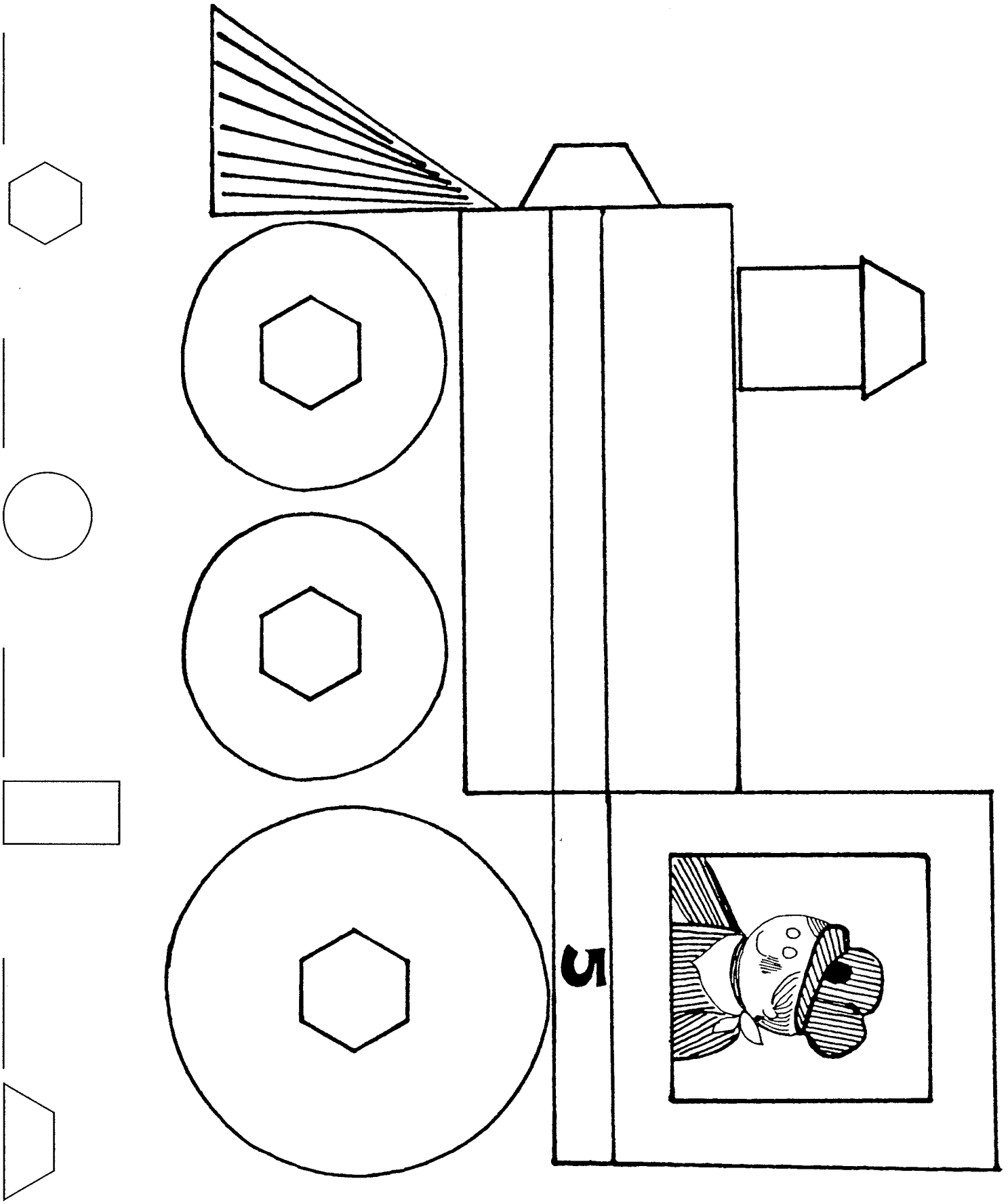

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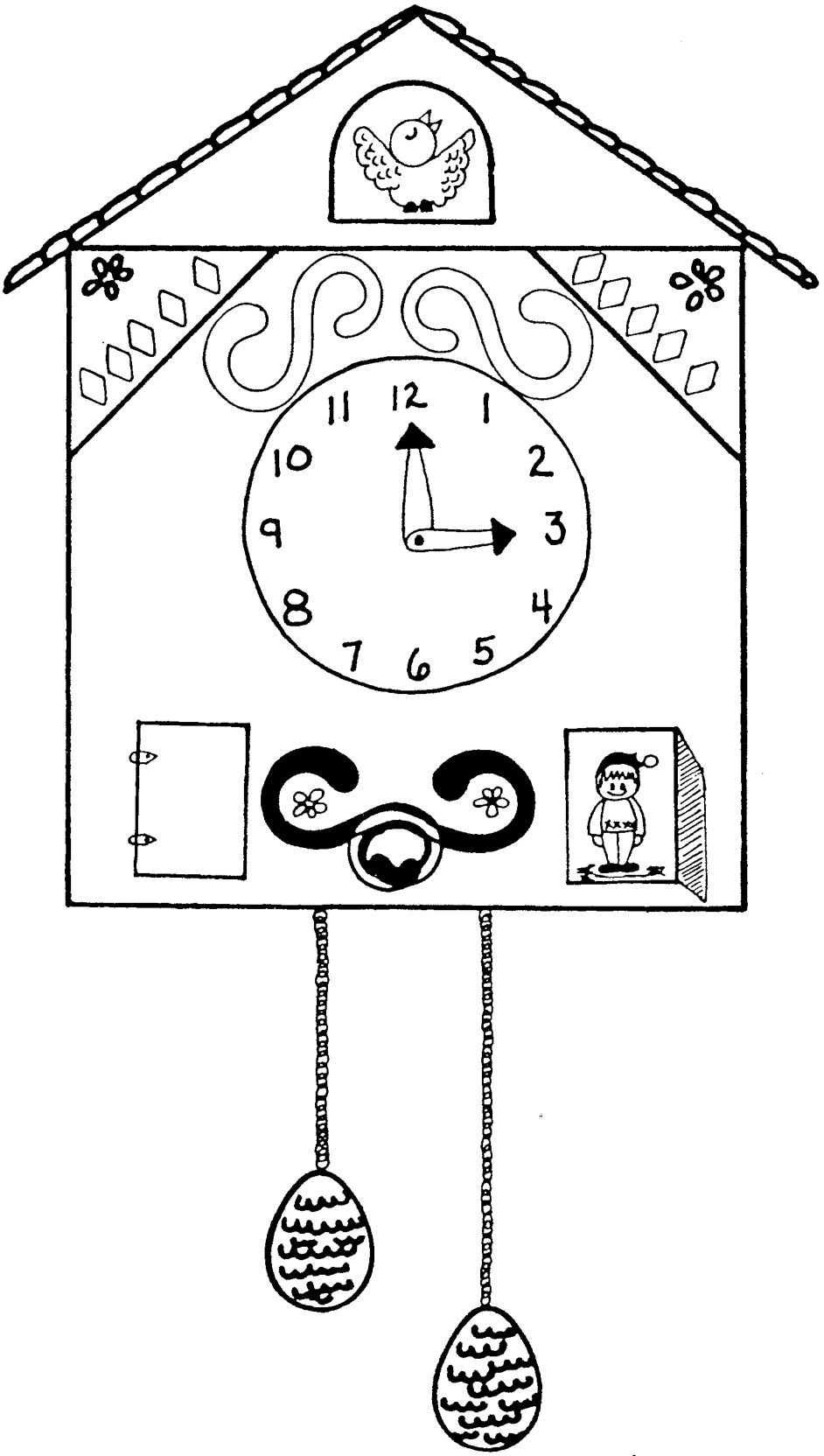
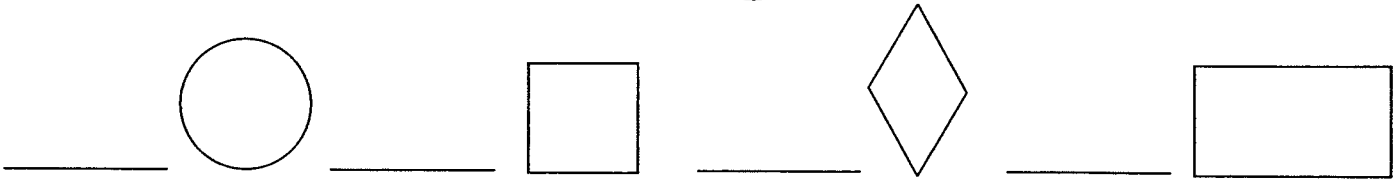
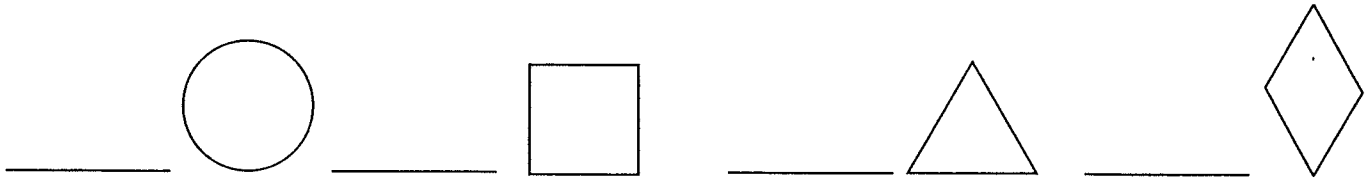




Shapes Search



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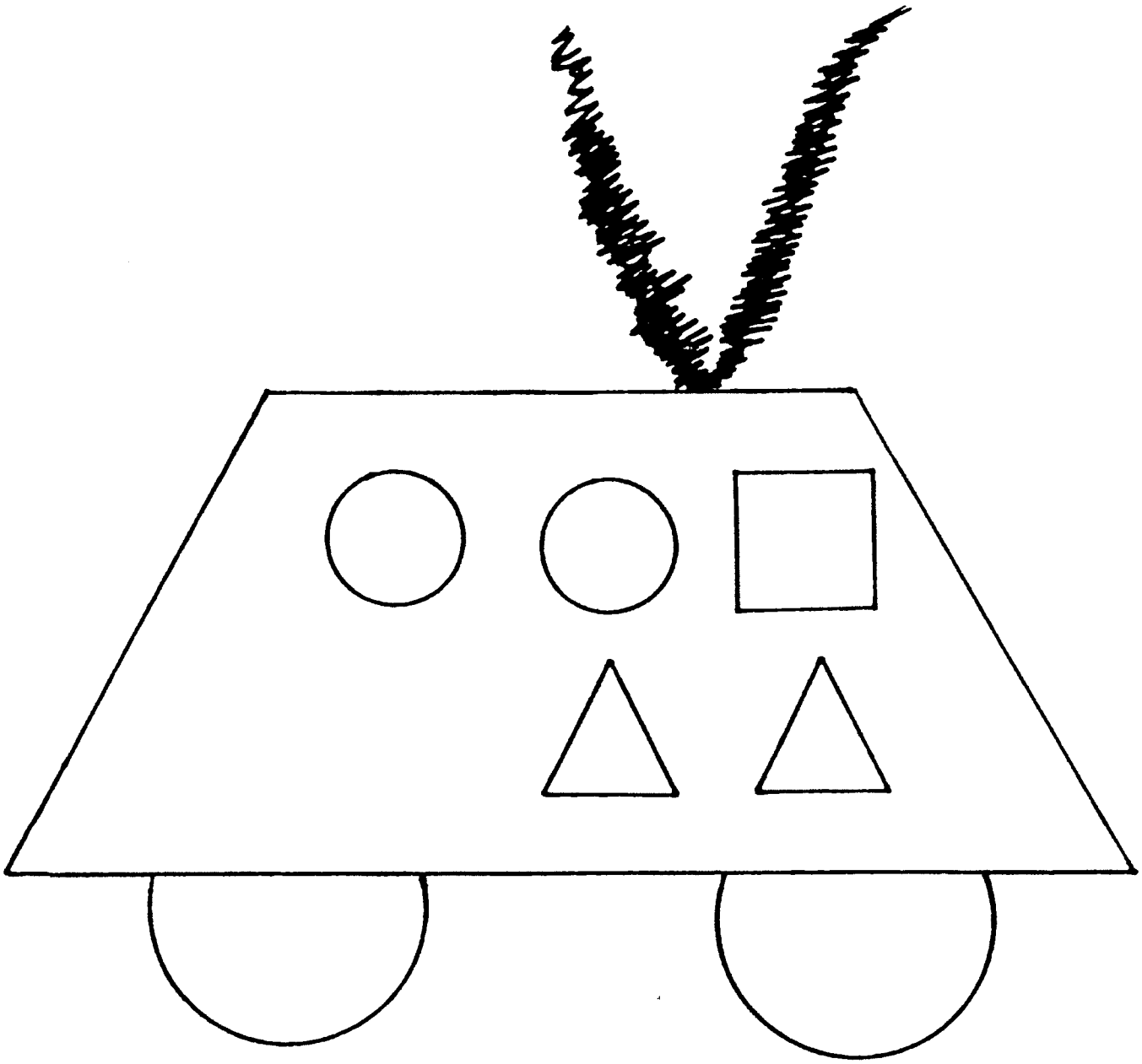
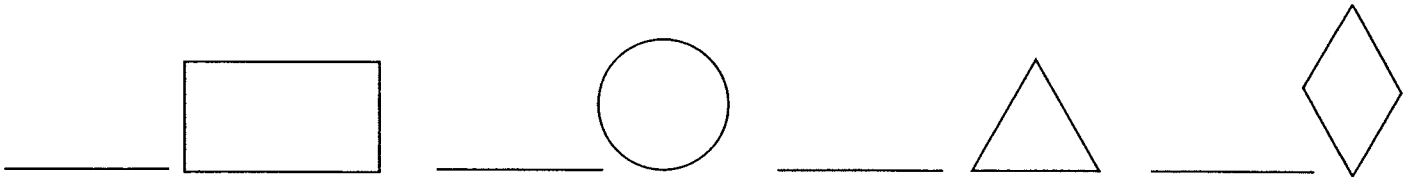
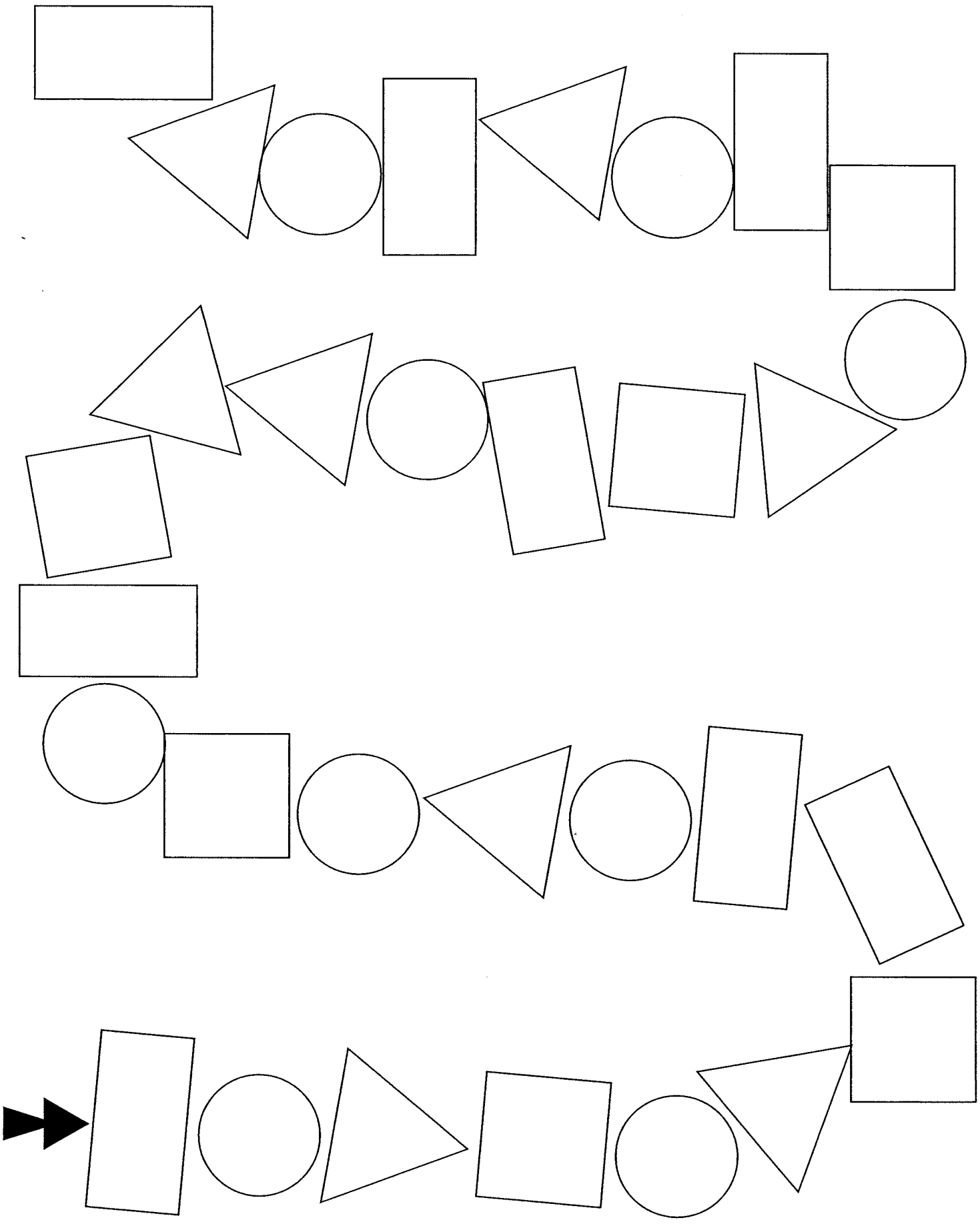


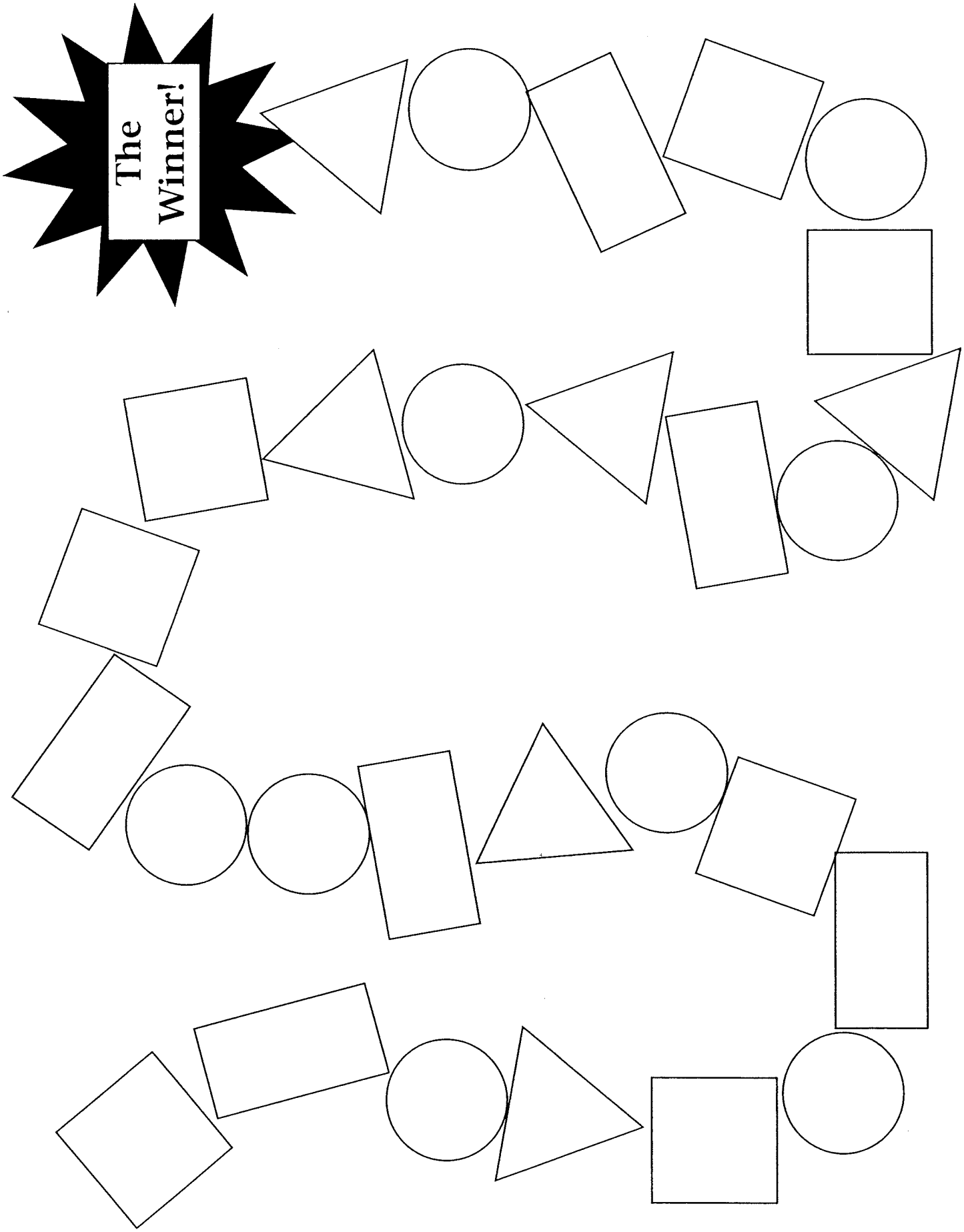


Shapes Search

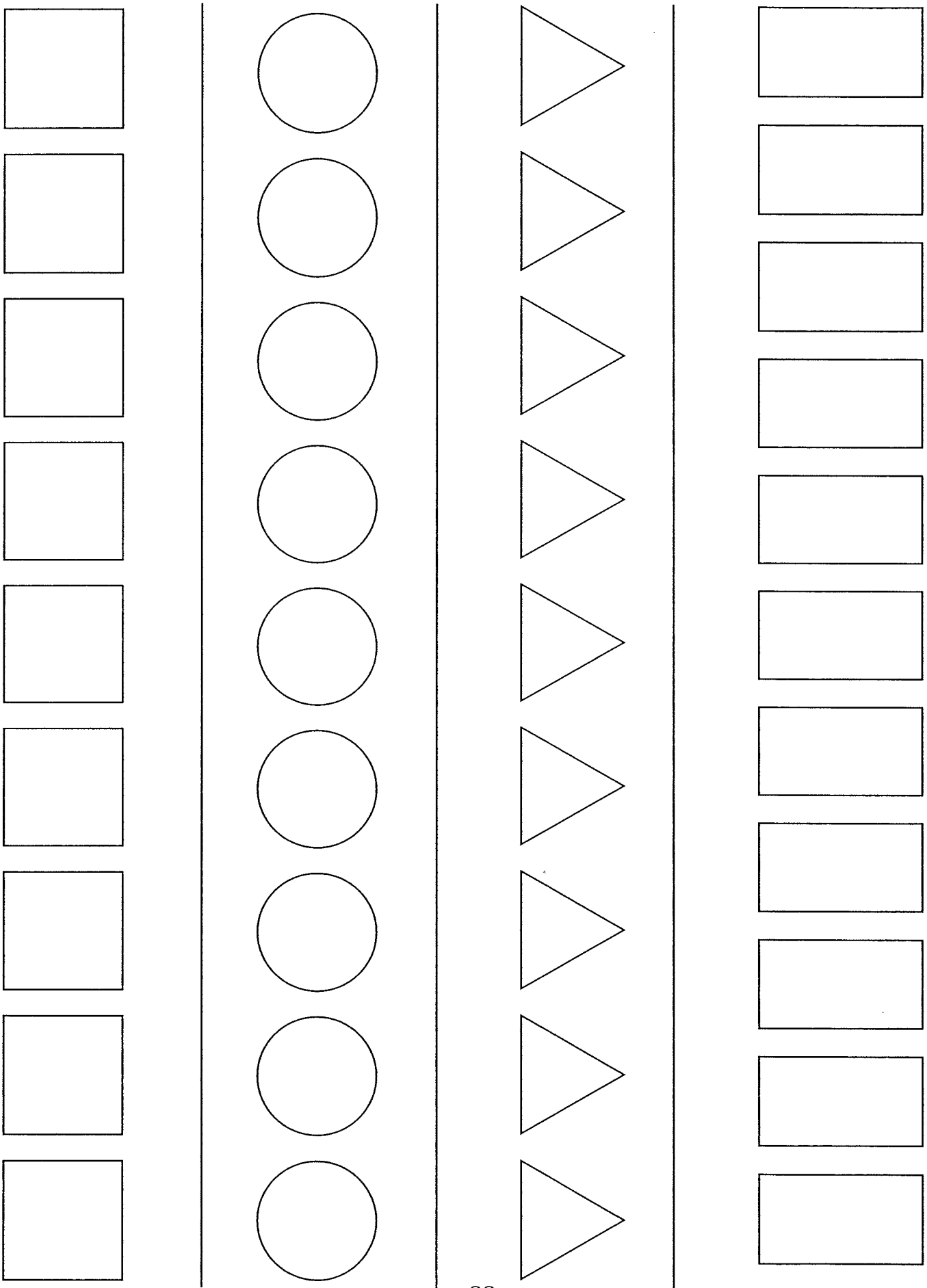
Shapes Race



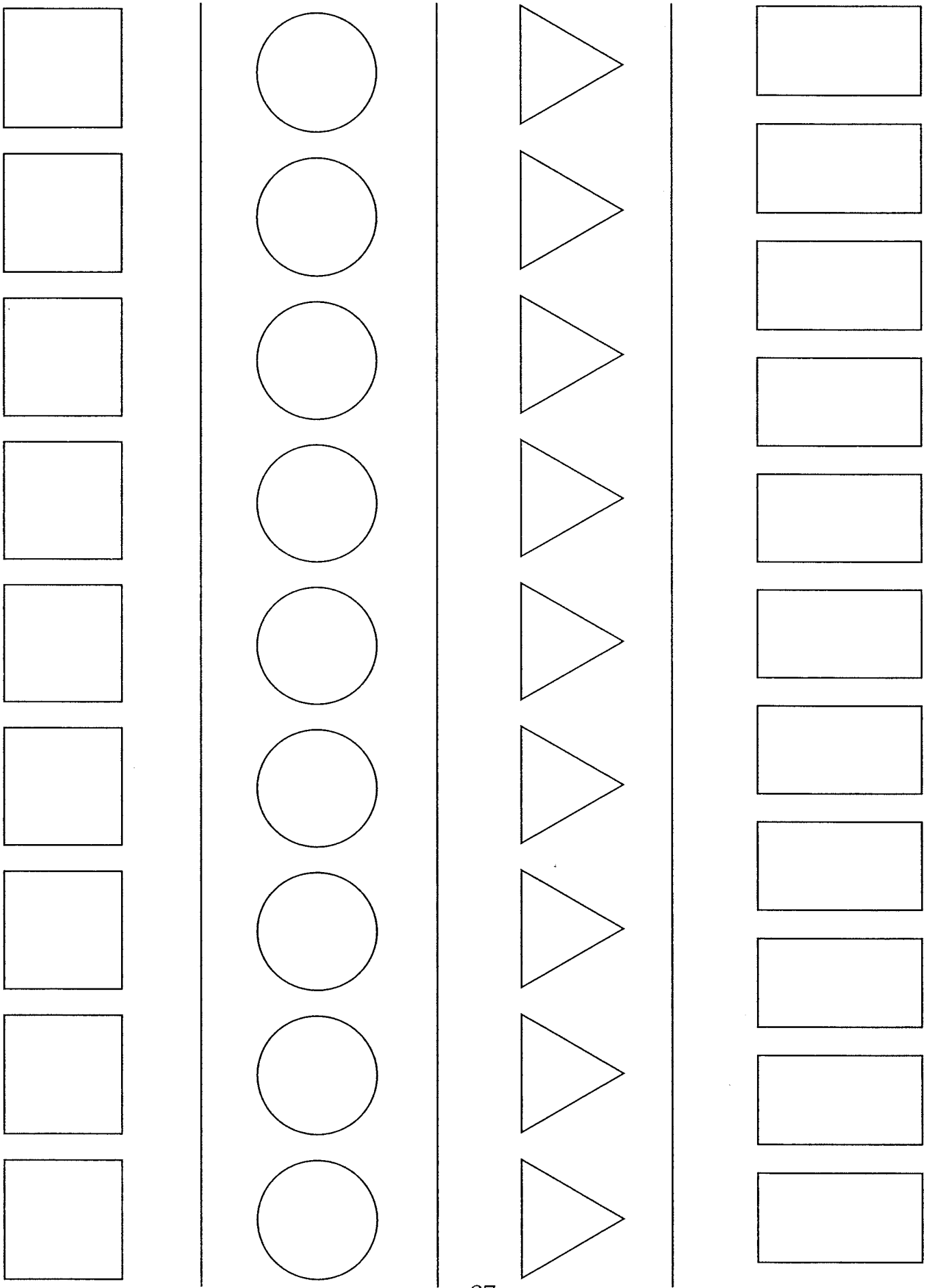
Shapes Race



Spin and Count



Spin and Count



Apply the appropriate labels on both ends of each box lid. Either run the labels on full-sheet Avery Labels No. 5165, cut apart and attach; or simply cut apart these pages and glue or tape on.

Shapes Floor Graph

A PRACTICE & ENRICHMENT BOX

Feely Box Shapes

A PRACTICE & ENRICHMENT BOX

Shapes Sorting

A PRACTICE & ENRICHMENT BOX

Shapes Lotto

A PRACTICE & ENRICHMENT BOX

Felt Shapes

A PRACTICE & ENRICHMENT BOX

Shape Templates

A PRACTICE & ENRICHMENT BOX

Shapes Mat

A PRACTICE & ENRICHMENT BOX

Shapes, Spinners & Scissors

A PRACTICE & ENRICHMENT BOX

Templates and Spinners

A PRACTICE & ENRICHMENT BOX

What's Missing?

A PRACTICE & ENRICHMENT BOX

Rotten Rectangle

A PRACTICE & ENRICHMENT BOX

Shapes Search

A PRACTICE & ENRICHMENT BOX

Shapes Race

A PRACTICE & ENRICHMENT BOX

Elastic Shapes

A PRACTICE & ENRICHMENT BOX

Shapes Floor Graph

A PRACTICE & ENRICHMENT BOX

Feely Box Shapes

A PRACTICE & ENRICHMENT BOX

Shapes Sorting

A PRACTICE & ENRICHMENT BOX

Shapes Lotto

A PRACTICE & ENRICHMENT BOX

Felt Shapes

A PRACTICE & ENRICHMENT BOX

Shape Templates

A PRACTICE & ENRICHMENT BOX

Shapes Mat

A PRACTICE & ENRICHMENT BOX

Shapes, Spinners & Scissors

A PRACTICE & ENRICHMENT BOX

Templates and Spinners

A PRACTICE & ENRICHMENT BOX

What's Missing?

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Rotten Rectangle

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Shapes Search

A PRACTICE & ENRICHMENT BOX

Shapes Race

A PRACTICE & ENRICHMENT BOX

Elastic Shapes

A PRACTICE & ENRICHMENT BOX

Play Dough Shapes

A PRACTICE & ENRICHMENT BOX

Spin and Count

A PRACTICE & ENRICHMENT BOX

Play Dough Shapes

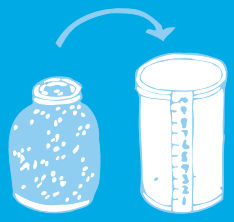
A PRACTICE & ENRICHMENT BOX

Spin and Count

A PRACTICE & ENRICHMENT BOX

introduction to

Measuring



BOX IT OR BAG IT MATHEMATICS

Practice & Enrichment Boxes

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Paula Symonds

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Box It or Bag It Mathematics, Practice & Enrichment Box:
Introduction to Measuring

Box It or Bag It Mathematics consists of:
- Teachers Resource Guide and Blackline Masters, Kindergarten
- Teachers Resource Guide and Blackline Masters, 1st and 2nd Grade
- Practice & Enrichment Boxes:
  - Shapes
  - Introduction to Measuring
  - Understanding Measuring
  - Reading, Writing & Understanding Numerals 0–10
  - Pattern
  - Arithmetic
  - Money
  - Place Value Counting
  - Place Value Addition & Subtraction

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Getting Started

Once you've introduced Measuring through a variety of group lessons (be sure to see Box It or Bag It Mathematics Teachers Resource Guide, Kindergarten, *INTRODUCTION TO MEASURING), you will want children to practice and extend their understanding using the activities in this packet. We've found the following ideas helpful for successful Independent Practice Time.*

Provide no more than eight to twelve boxed activities at one time for a class of 30. Too many activities create more than tolerable chaos. Each Box is designed to be used by one to four children.

Model each activity thoroughly until children can tell you what to do, step by step. You'll find "box ingredients" and "playing instructions" for each activity in this packet. We use clear contact paper to secure this information inside the box lids so WE can remember what goes in each Box and how each game is played. Reading the directions would be too difficult for most primary children.

Resist the temptation to put out all your challenging Boxes at once—provide an equal balance of easy and hard. (If you set out too many difficult Boxes, all the children will need you at once and the noise level will be almost unbearable as your children try to cope with the stress of too many difficult tasks.)

When you construct these Practice and Enrichment Boxes, cover your box tops with the same design contact paper. That way, you'll be able to pull your Introduction to Measuring Boxes off the shelf easily, even if they've gotten mixed in with other boxes. (Boxes can be ordered from The Math Learning Center in three sizes: standard (9 X 12 X 2), half size (9 X 6 X 1-7/8), and junk (4 X 7 X 1-1/8). See the Box It or Bag It Mathematics Teachers Resource Guide, *MATERIALS INDEX, for additional ordering and making information.*

The Boxes themselves can be used for group instruction and are ideal for an aide or parent to use with small groups. Some of the Boxes can be easily adapted for use with your whole group.

During Independent Practice Time, it's critical that you be available and in circulation to make sure things go smoothly. Once routines even out, you'll have ample opportunity to observe individual students at work. You can readily spot children with problems or with understandings beyond your predictions. See the next page for some observation guidelines to use as instruction progresses.

Be sure to see the Box It or Bag It Mathematics Teachers Resource Guide, *INTRODUCTION, for more implementation strategies.*

Introduction to Measuring Observation Sheet

															Children's Names
															Child is able to share materials and work cooperatively
															Child is able to establish order
															Child is able to talk about his or her work
															Child is able to compare length (shorter/longer)
															Child is able to compare weight (heavier/lighter)
															Child is able to compare capacity (holds more/holds less)
															Child is able to compare duration (more time/less time)
															Child is able to compare quantity (more than/fewer than)

Length

WHICH STRING? (1-4 Children)

Box ingredients→ box of eight crayons

eight measuring strings with masking tape flags

record booklets

half box for storage

PLAYING INSTRUCTIONS

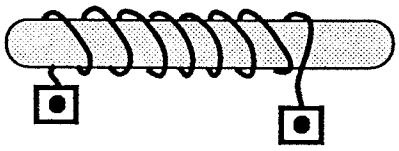
1. Put your name on your record booklet.
2. Find a measuring string that matches each thing in your room that the record booklet shows. Color the dot on each page as you find the string that matches.
3. Have your finished booklet checked.

MAKING INSTRUCTIONS

Measuring Strings

1. Put up lengths of masking tape in your room to match the children's record booklets. You'll have to mark the width of the door, the circumference of a wastepaper basket, the back of a chair, and five other items. See Which String? blacklines.
2. Cut a length of string to match each marked item in the room. Mark each string with two colored dots as illustrated.

3. Wrap each string around a popsicle stick to prevent tangling.



Record Booklets

Locate Which String? record sheets in the blacklines. Run copies, cut into fourths, and collate pages. Store booklets, crayons and measuring strings in a half box.

NOTE: If this activity is especially popular in your room, you might want to make a second box.

STICKS IN A BAG (2 Children)

Box ingredients→ twelve sticks of varying lengths

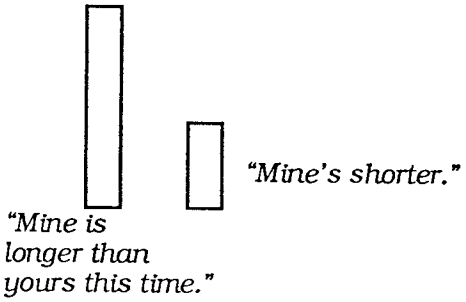
cloth bag

more/less spinner

standard box or half box for storage depending on the size of your sticks

PLAYING INSTRUCTIONS (Easy Game)

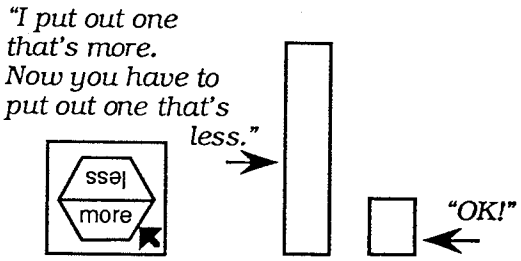
1. Put all the sticks into the cloth bag.
2. Reach in and pull out one stick. Let your partner reach in and pull out one stick. Lay them side by side and compare them.



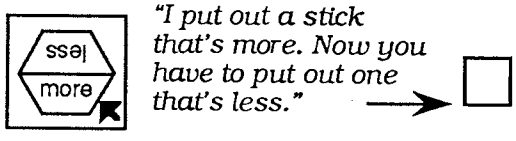
3. Repeat, letting your partner pull a stick out of the bag first this time. Continue pulling sticks out of the bag and comparing their lengths until you've used up all the sticks.

PLAYING INSTRUCTIONS (Tricky Game)

1. Don't put the sticks in the bag this time; lay them out in the box lid so you and your partner can both see them.



2. Spin the more/less spinner. Choose a stick to represent what the spinner says and lay it on the table. Your partner has to choose a stick from the box that is the opposite. This can get tricky.

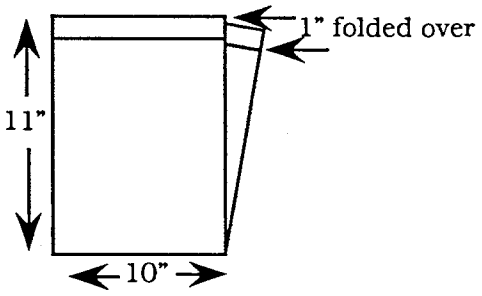


"That's impossible! There's not one in the box that's shorter than that one! I know, I won't put one out at all—that's less!"

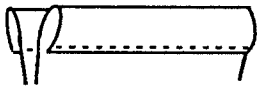
MAKING INSTRUCTIONS

Sticks (12)
Use 3/4" dowels or sticks cut to lengths varying between 1" and 11" (8-1/2" if you want your sticks to fit in a half box). Be sure to cut a pair or two the same length, too. You could use old Sterns Blocks or Cuisenaire Rods if you have them.

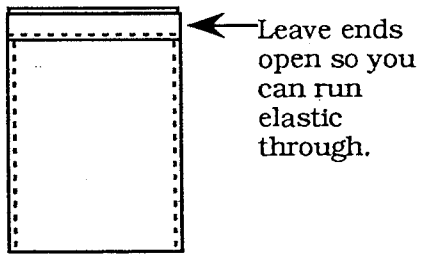
Cloth Bag
You'll need a piece of sturdy cotton-type fabric 10 X 24 and a 7" length of soft 3/8" elastic.



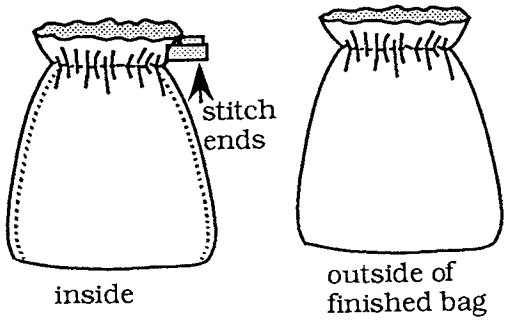
1. Stitch top folds. Leave open at the ends.



2. Stitch sides of bag (1/2" seam allowance), leaving 1" folds at top unstitched on both ends so you can run elastic through.



3. Run elastic through the top. Stitch ends of elastic together when you get the strip pulled through.

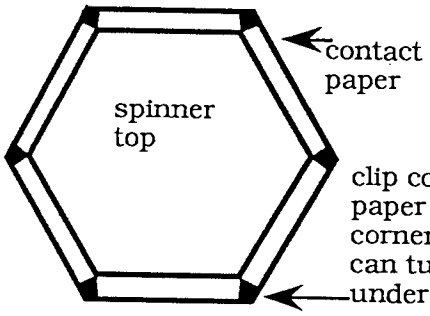


More/Less Spinner

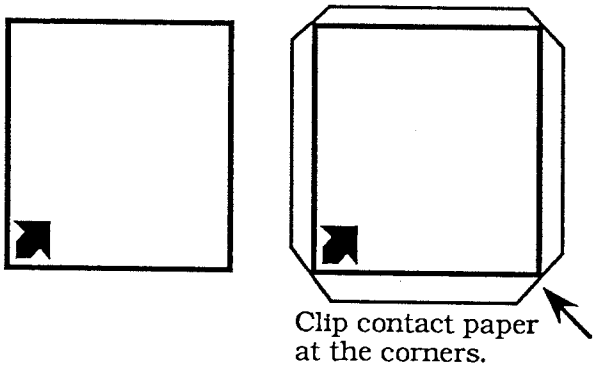
Four of the activities in this packet include more/less spinners. Here are directions for assembling the spinners.

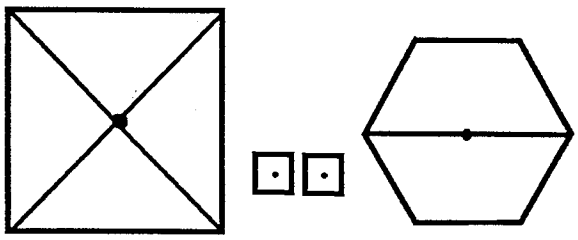
For each spinner you'll need:
- spinner top from blacklines
- two 6 X 6 square pieces poster or matte board, any light color
- one regular-sized paper clip
- clear contact paper
- two 1"-square scraps of posterboard

1. You may want to color in spinner top with felt pens or crayons before you start.
2. Glue spinner top to one of the 6 X 6 pieces of poster board. Cut it out.
3. Cut a piece of clear contact paper somewhat larger than the spinner top. Place the contact paper over the top and smooth it down. Snip the edges of the contact paper and turn them under the spinner top.



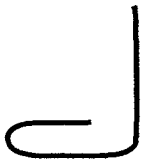
4. Draw a small arrow at the corner of the other 6 X 6 piece of railroad board. Cover the square with clear contact paper, turning the edges under.

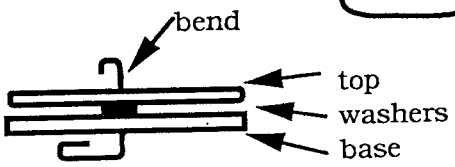




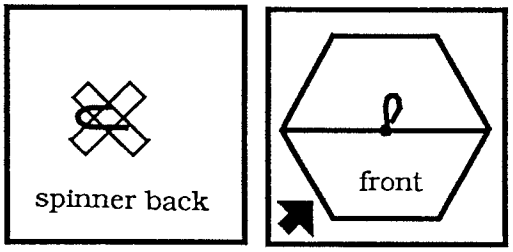
Draw lines diagonally across the back of the 6 X 6 square to help locate the midpoint.

5. To assemble the spinner, poke holes through the center of the 6 X 6 square, two 1"-square "washers", and the center of the spinner top.
6. Unfold a paper clip by pulling out the middle section and bending it upwards.





7. Poke it upwards through the squares, the two washers, and the spinner top.



8. Tape the paper clip with an "X" of strapping tape to the back of the 6 X 6 square to hold the spinner together. Bend down the top point of the paper clip in front to prevent injury.

Store the spinner, folded bag, and sticks in a standard box.

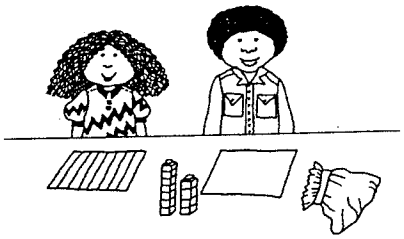
CUBES IN A BAG (2 Children)

Box ingredients→ 50 unifix cubes in two different colors (25 of each)

two pieces of 6 X 9 poster board to match the colors of your unifix cubes

cloth bag

half box for storage



PLAYING INSTRUCTIONS

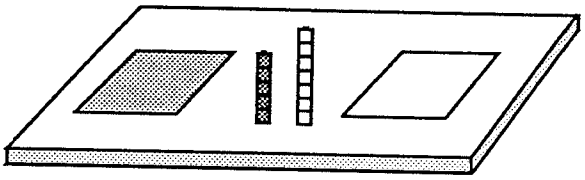
1. Have each player decide which color to be. Take the poster board card of that color and put it in front of you. Your partner does the same.
2. Put all 50 unifix cubes into the cloth bag and shake them around to mix the colors.
3. Pull out a handful of cubes. Sort them by color. Take the cubes of your color. Put them on your card. Give the others to your partner to put on his or her card.

"I only get 2 this time. You get 4."

4. Let your partner do step number three.

"This time we got the same number of cubes."

5. Both of you stack all the cubes on your cards. Compare the heights of your towers.



"Your tower is taller than mine. You got more cubes than I did this time around."

6. Repeat the procedure—pull cubes out, sort; pull cubes out, sort; stack cubes; compare tower heights—until there are no more cubes in the bag. Share your results with someone.

MAKING INSTRUCTIONS

Cloth Bag (1)
See Sticks in a Bag for instructions. Store unifix cubes, poster board cards, and folded cloth bag in a half box.

SECRET EGGS (2 Children)

See Box It or Bag It Mathematics Kindergarten Teachers Resource Guide, INTRODUCTION TO MEASURING, Secret Eggs, for group introduction to this Box.

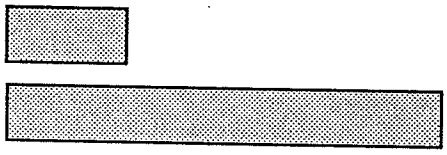
Box ingredients→ twelve plastic hollow Easter eggs, each filled with a rolled-up length of grosgrain ribbon

empty egg carton, bottom only

standard box for storage

PLAYING INSTRUCTIONS

1. Set the twelve eggs into the egg carton.
2. Choose one egg. Open it and unroll the length of ribbon. Let your partner do the same. Lay the ribbons side by side and compare.



"Look how long yours is compared to mine!"

3. Repeat, letting your partner choose an egg and open it first this time. Continue choosing eggs, opening them and comparing the lengths of ribbon until all the eggs are open. (You'll get to open and compare six times.)
4. When you're finished, roll the ribbons up carefully and put each inside an egg (it doesn't matter which) so the game is ready for someone else.

MAKING INSTRUCTIONS

Eggs (12)
Buy the hollow plastic eggs that are the same size as regular chicken eggs. (It's nearly impossible to find them at any other time of year than Easter.)

Ribbons
Buy two yards of 1" wide grosgrain ribbon and cut into the following lengths: 2", 4", 4", 8", 8", 9", 10", 11", 6", 5", 3", 1". It's even more fun to have different colored ribbons in your eggs, so if you have scrap pieces, that's fine. Be sure to use wide grosgrain—other types of ribbon are hard to roll up, tend to get crumpled in the eggs, and don't lie flat as children try to compare them.

Store ribbons in the eggs. Store the eggs and egg carton bottom in a standard box.

Weight

WEIGHING CARDS (1-2 Children)

Box ingredients→

two milk box scales

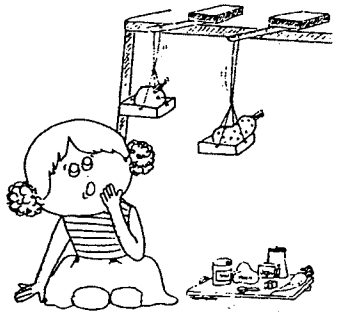
two rulers

heavy books or blocks to anchor rulers

things to weigh in a tub or other large container

weighing record cards

half box for storage



PLAYING INSTRUCTIONS

1. Set up milk box scales.
2. Pick two objects. Set one in each scale. Compare their weights.
3. Set the things you weighed on a weighing card.
4. When finished, have your work checked.

MAKING INSTRUCTIONS

Milk Box Scales (2)
See Box It or Bag It Mathematics Teachers Resource Guide, MATERIALS INDEX, for making instructions.

Things to Weigh (15-20 objects, all heavier than a box of crayons)
Here are some ideas: a can of tomato sauce, a can of green chilies, a candle, a block, a big old dog bone, a large bolt, a screwdriver, a wrench, a small (8-oz. size) box of detergent sealed with strapping tape, a bag of metal washers, a lump of clay in a plastic bag, and so on. Scrounge around your kitchen cupboards, your children's rooms, your garage—common, everyday items seem to capture children's interest best. Store objects, scales and rulers in a plastic dish tub or other sturdy container.

Weighing Record Cards
Locate weighing record cards in the cardstock portion of this packet. Laminate if you wish. Store cards in a half box. Place half box in the tub of things to weigh.

WHICH IS HEAVIEST? (1-2 Children)

Box ingredients→

milk box scale ruler

heavy books or blocks to secure ruler

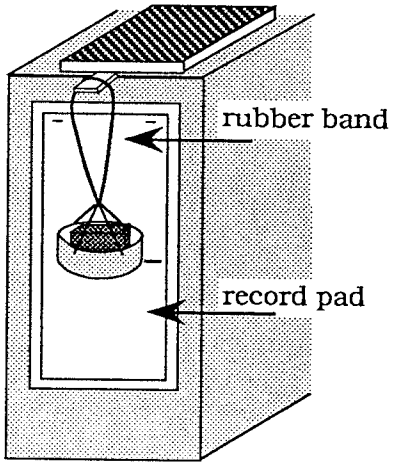
10-15 items of varying weights, each labeled with its name and a dot of color

record pad

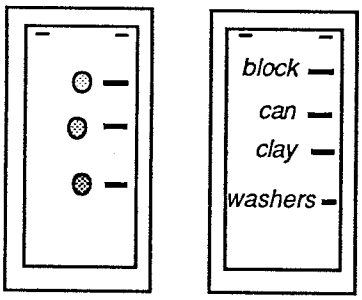
standard box for storage

PLAYING INSTRUCTIONS

1. Set up milk box scale by record pad (see illustration).



2. Choose something to weigh. Put it into the scale. Mark a line on the record pad where the bottom of the scale now comes. Beside the line copy the name of the object or color a little circle to match the object's color dot.
3. Repeat as many times as you like, each time marking where the scale comes and recording the name or color code of the object.

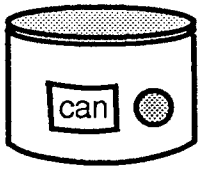


4. When you're finished, tear your record sheet off the pad and share it with someone. Can you tell which object was heaviest? Lightest? Can you line up the objects you weighed from lightest to heaviest for someone else to see?

MAKING INSTRUCTIONS

Milk Box Scale
See Box It or Bag It Mathematics Teachers Resource Guide, MATERIALS INDEX, for making instructions. Store the scale and ruler in a standard box so you'll be sure to remember that you have this activity. (Theoretically, the contact-covered Box, sitting alongside the other Measuring Boxes on your shelf, will trigger your memory!)

Things to Weigh (10-15 objects)
See ideas under Weighing Cards. Label each item with its name and a dot of color so that children will have a way to record what they weigh on the record pad. (Some will copy the item name; some will color a little swatch to match the color dot.) Store in a tub or other sturdy container.



Record Pad
Staple 10-15 sheets of newsprint, 8 X 18 or 8 X 24, to a sheet of poster board, 10 X 20 or 10 X 26. When you set up the Introduction to Measuring activities in your room, attach the record pad to the side of a bookshelf.

WEIGHTS IN A BAG (2 Children)

See Box It or Bag It Mathematics Kindergarten Teachers Resource Guide, INTRODUCTION TO MEASURING, Weights in a Bag, for a group introduction to this Box.

Box ingredients→ twelve objects of varying weights

cloth bag

balance scale

half or standard box for storage, depending on the size of your weighing objects

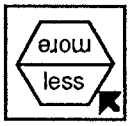
PLAYING INSTRUCTIONS (Easy Game)

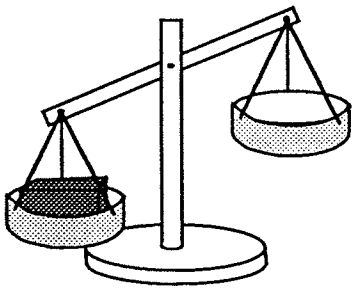
1. Put all the objects into the cloth bag.
2. Reach in and pull out one item. Let your partner do the same. Hold both items, one in either hand, and predict which is heavier. Let your partner hold the items and predict too.
3. You and your partner each place your item on one side of the scale. Compare. Lay your items side by side on the table and start all over again. This time, let your partner reach into the bag and choose an item first. Continue until all the objects have been pulled out of the bag and compared. Share your results with someone else.

PLAYING INSTRUCTIONS (Tricky Game)

1. Don't put the objects in the bag this time; lay them out in the box lid so you and your partner can both see them.
2. Spin the more/less spinner. Choose an object to represent what the spinner says and put it in one side of the scale. Your partner has to choose an object from the box that is the opposite. This can get tricky.

"I put in the clay for less. Now you have to put something on your side that's heavier."





"The clay! Oh, no! That's the heaviest thing in the box! Now what am I going to do?"

MAKING INSTRUCTIONS

Things to Weigh
See Weighing Cards for more ideas, but be sure the objects you choose are small enough to fit into a standard or half box.

Spinner
Locate more/less spinner top in the blacklines. See Sticks in a Bag for assembly directions.

Cloth Bag
See Sticks in a Bag for making instructions. Store the folded bag in box along with things to weigh and the spinner.

Capacity

FILL AND MARK (2 Children)

Box ingredients→

5 pounds of rice stored in a large cooky tin or other container with a tight-fitting lid

jars in divided box

measuring cups or scoops of varying sizes

funnels

masking tape

6 X 18 paper

scissors and pencils

half box for storage

PLAYING INSTRUCTIONS

1. Choose a jar.
2. Lay your jar on a piece of 6 X 18 paper and draw around it.
3. Put masking tape up the side of the bottle from bottom to top.
4. Fill your measuring cup exactly to the top with rice. Pour it into the jar. Don't forget to use the funnel! Mark the masking tape with a pencil to show how high the rice is. Keep putting cupfuls of rice into the jar until it's full. After putting in each scoop, be sure to mark the height of the rice.
5. When you're finished, pour the rice out of the jar. Take the masking tape off and put it up the side of the jar you traced on paper. Now you have a record of what you did!

MAKING INSTRUCTIONS

Paper
Cut 10-15 sheets of 6 X 18 newsprint. Fold in half and store in a half box, along with a roll of masking tape. Keep the rice, jars, funnels, and scoops on your general math materials shelf and the scissors and pencils on your classroom tools shelf.

THE MEASURING JAR (2 Children)

See Box It or Bag It Mathematics Kindergarten Teachers Resource Guide, INTRODUCTION TO MEASURING, The Measuring Jar, for a group introduction to this Box.

Box ingredients→

jar with straight sides, such as a 10 oz. pickle jar

scoops or variety of measuring cups

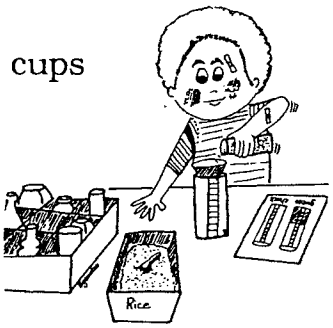
jars in a divided box

rice

record sheets

funnels

junk box for storage



PLAYING INSTRUCTIONS

1. Choose a jar and fill it with rice. Record the jar's letter on the "pouring" jar on the record sheet.
2. Guess how far it will fill the measuring jar.
3. Color the "guess" jar on the recording sheet to show how high you think the rice will come.
4. Put a funnel on the measuring jar, then pour your jar of rice into the measuring jar.
5. Color the "check" jar on the recording sheet to show what really happened.

MAKING INSTRUCTIONS

Record Sheets

Locate The Measuring Jar record sheet in the blacklines. Run copies and cut apart. Store in a junk box which is labeled and covered with contact paper. Keep the rice set-up on the general math materials shelf.

CUPS TO FILL (2 Children)

Box ingredients→

two containers of colored water (quart or half-gallon milk cartons, plastic milk or juice containers, etc.)

sixteen plastic 8 oz. tumblers

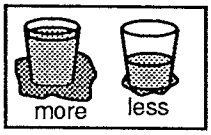
eight more/less vinyl mats

towels

half box for storage

PLAYING INSTRUCTIONS

1. Set up glasses on the more/less mats.

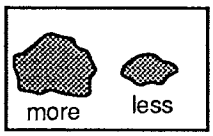


2. Take turns pouring water into the glasses. You can fill either glass on the marker card. Let your partner fill the other.
3. When you've gotten all the glasses filled, have your work checked.

MAKING INSTRUCTIONS

More/Less Vinyl Mats:
You'll need eight pieces of solid colored (not black) oilcloth or vinyl, 8-1/2 X 5-1/2, and a permanent black felt tip marker

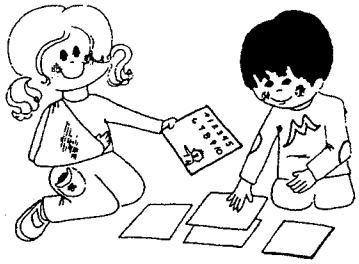
Mark a "more blob" and a "less blob" on each vinyl piece.



Store the vinyl mats in a half box. It would be wise to cover both the top and bottom of this box with contact paper. Keep the water containers, plastic tumblers, and towels near your sink area, and have children bring the box to the sink area at Independent Practice Time.

Duration

HOW MUCH TIME? (2 Children)



Box ingredients→ How Much Time? task cards

How Much Time? record cards

half box for storage

PLAYING INSTRUCTIONS

1. Spread out task cards face down.
2. Pick up a task card. Have your partner pick up a task card. Get the things you'll need to do what the cards say.
3. Do what the cards say—both of you at once! Put each task card where it belongs on a "more time", "less time", or "the same time" card.
4. Do this over and over until you use up all the task cards. Have fun!

NOTE: This is a challenging task for kindergartners to handle independently. It works wonderfully as a whole group activity: two children are chosen to perform each task; the group predicts which will take more time and which will take less each time around. You might also have a parent or aide supervise groups of two or four children.

MAKING INSTRUCTIONS

Task Cards
Locate How Much Time? task cards in the cardstock portion of this packet. Color with waterbase felt markers if you wish. Laminate and cut apart.

Time Cards
Locate How Much Time? time cards in the cardstock portion of this packet. Laminate. Cut apart. Store time cards and task cards in a half box.

SINKERS (2 Children)

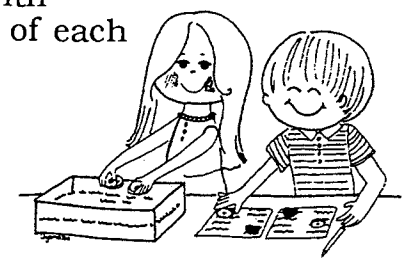
Box ingredients→ variety of metal lids (15-20) with holes drilled in the center of each

clear container of water

two towels for spills

time cards

half box for storage



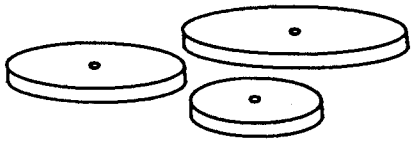
PLAYING INSTRUCTIONS

1. Choose two lids from the collection. Predict which one will sink faster, which one slower.
2. Set the two lids on top of the water and watch to see which one sinks faster. (If your lids don't sink, get them completely wet and start again.)
3. Put the two lids on a time record. Show which one sank faster and which sank slower.
4. Try it again with two different lids.
5. Can you discover anything that's the same about the lids that sink quickly? Share your ideas with someone.

NOTE: You can do this activity without a partner.

MAKING INSTRUCTIONS

Metal Lids



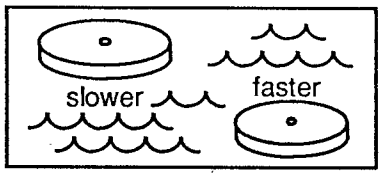
Use a hammer and a very large nail or a drill to make a hole approximately 1/8" in diameter in each lid.

Water

To make lids sink with ease, add detergent to your water to break the surface tension.

Time Records

Use a piece of oilcloth or an old shower curtain to create ten 4 X 9 time records. Draw the diagram below on each record with a black permanent marking pen.



Store time records and lids in a half box. Leave the towels and water container near your sink.

Quantity

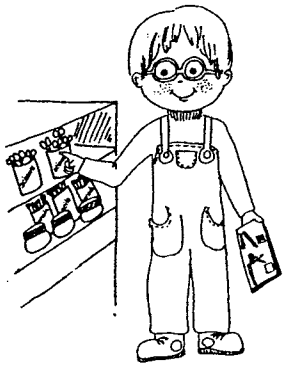
HOW MANY? (1-4 Children)

Box ingredients→ task cards

Vis-a-vis or overhead projector pens

half box for storage

unifix cubes, available if needed



PLAYING INSTRUCTIONS

1. Count the things on a task card. Use the unifix cubes to help you count, if you wish. (Stack one cube for each thing.) Write the correct number in each box as you get things counted or simply set your stack of unifix cubes in the square. Circle the number that means more on each page or task card.
2. Have your task cards checked when you're finished.

MAKING INSTRUCTIONS

Task Cards
Locate How Many? task cards in cardstock portion of this packet. Color with waterbase felt markers if you wish. Laminate. Cut apart. Store in a half box with several Vis-a-vis or overhead marking pens. Keep a tub of unifix cubes available for children who want to use them.

EGG CARTON GRAPHS (2 Children)

Box ingredients→ eight small clear plastic film containers filled with different numbers of small objects

more/less spinner

cloth bag

eight egg cartons with lids cut off

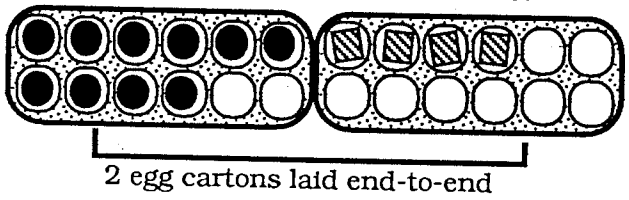
half box for storage

PLAYING INSTRUCTIONS (Easy Game)

1. Put all the film containers filled with objects into the cloth bag.
2. Reach in and pull out a container. Open it and put the objects into your side of the egg carton graph, one object per cup. Let your partner do the same. Compare quantities.

"I got 10 plastic chips in my container. I got more than you."

"I only got 4 blocks in my container. That's less than 10."



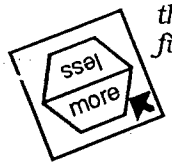
2 egg cartons laid end-to-end

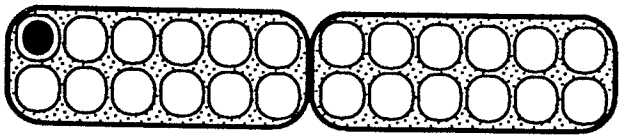
3. Repeat, letting your partner pull a container out of the bag first this time. Continue pulling containers out of the bag and comparing quantities using the egg cartons as graphs until you've used all the containers .

PLAYING INSTRUCTIONS (Tricky Game)

1. This time set out the containers in the box lid so you and your partner can both see them.
2. Spin the more/less spinner. Choose a container to represent what the spinner says, take the objects out, and put them into the cups on your side of the egg carton graph. Your partner has to choose a container from the box that's the opposite. This can get tricky.

"I spun 'more' but I picked the container that had only <u>one</u> thing in it. Now you have to find a container with less."





"That's impossible! I know, I'll put <u>nothing</u> on my side, 'cause zero's less than one!"

MAKING INSTRUCTIONS

Containers
Find eight small clear plastic film containers or other small plastic boxes. (Parents are often a good source.) Place anywhere from zero to twelve objects in each container. Use things like buttons, pattern blocks, legos, bread tags, game markers, old Monopoly houses, etc.

More/Less Spinner
Locate spinner top in blacklines. See Sticks in a Bag for assembly directions.

Cloth Bag
See Sticks in a Bag for directions. Store folded bag, containers filled with objects, and spinner in half box. Cut-off egg cartons will have to be stored separately.

ZIPLOCKS AND GRAPHS (2 Children)

See Box It or Bag It Mathematics Kindergarten Teachers Resource Guide, INTRODUCTION TO MEASURING, Ziplocks and Graphs, for a group introduction to this Box.

Box ingredients→

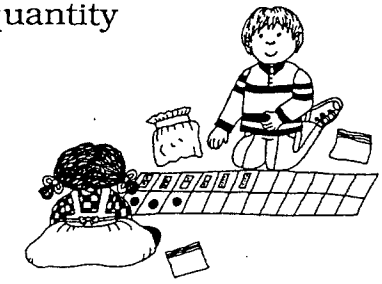
six quart-sized ziplock bags filled with objects varying in quantity from zero to twelve

cloth bag

three graphs

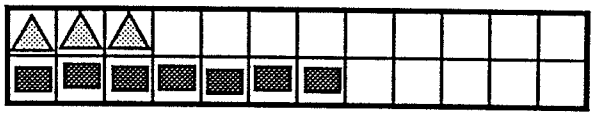
more/less spinner

standard box for storage



PLAYING INSTRUCTIONS (Easy Game)

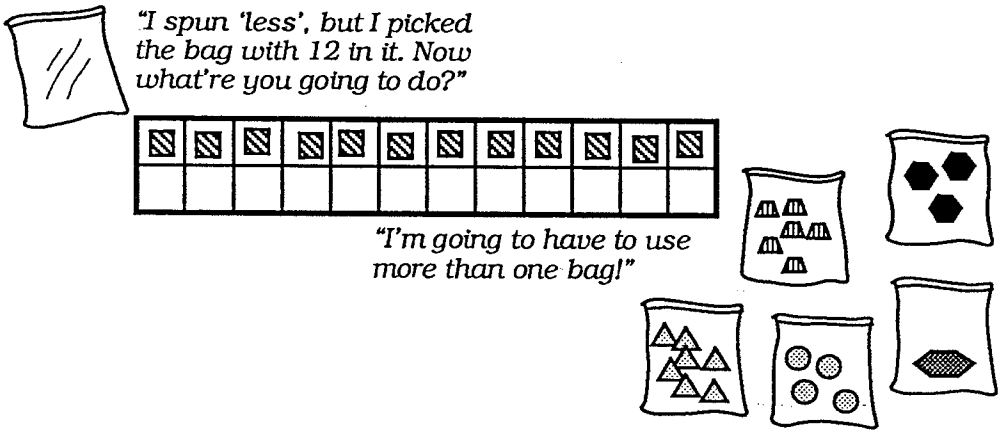
"I got three triangles in my bag."



"I got seven blocks— four more than you!"

1. Put all the ziplocks, filled with objects and closed, into the cloth bag.
2. Reach in and pull out a ziplock. Open it and put the objects on your side of the graph, one object per space. Let your partner do the same. Compare quantities.
3. Repeat, this time letting your partner pull a ziplock out of the cloth bag first. Continue pulling ziplocks out of the bag and comparing quantities on the graphs until you've used all the ziplocks.

PLAYING INSTRUCTIONS (Tricky Game)



1. Don't put the ziplocks in the bag this time; lay them out in the box lid so you and your partner can both see them.
2. Spin the more/less spinner. Choose a ziplock to represent what the spinner says, take the objects out, and put them on your side of the graph. Your partner has to choose a ziplock from the box that is the opposite. This can get tricky.

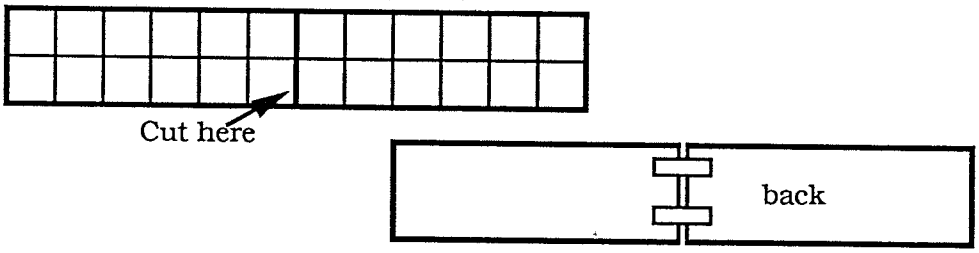
MAKING INSTRUCTIONS

Ziplocks (6)
Fill six quart-sized ziplocks with objects varying in quantity from zero to twelve. Small toys are fun—blocks, dominoes, matchbox cars, puzzle pieces, etc.

Cloth Bag
See Sticks in a Bag for directions.

Graphs (3)
You'll need one piece of white construction paper or tag, 6 X 24, for each graph. Mark the paper off into 12 boxes in two rows, as illustrated.

More/Less Spinner
Locate more/less spinner top in the backlines. See Sticks in a Bag for assembly directions. Store spinner, folded bag, folded graphs, and ziplocks filled with objects in a standard size box.



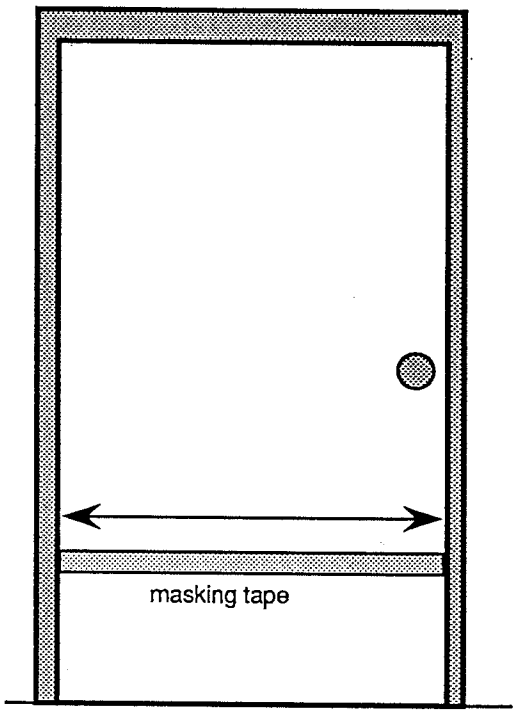
Laminate graph and tape pieces together with strapping tape so your graphs will fit into the storage box.

Blacklines

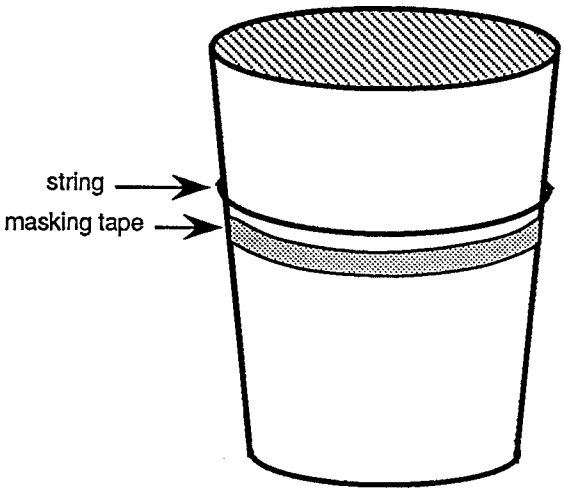
Patterns, cards, spinners, and other materials you'll make for the Practice & Enrichment Boxes described in this packet.

name_____

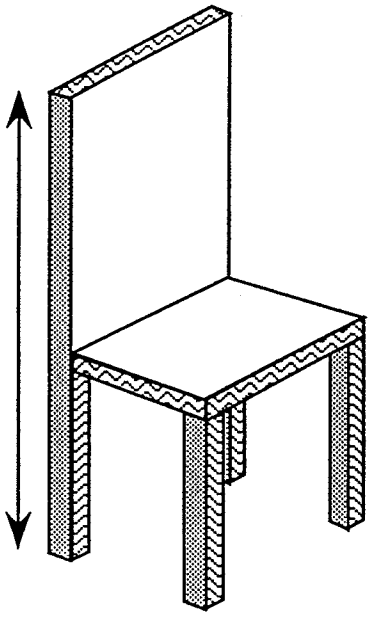
Which String?



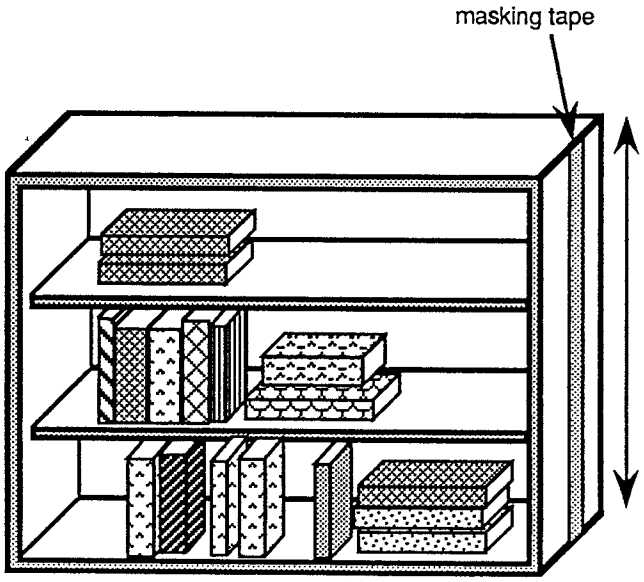
Door



Wastepaper basket



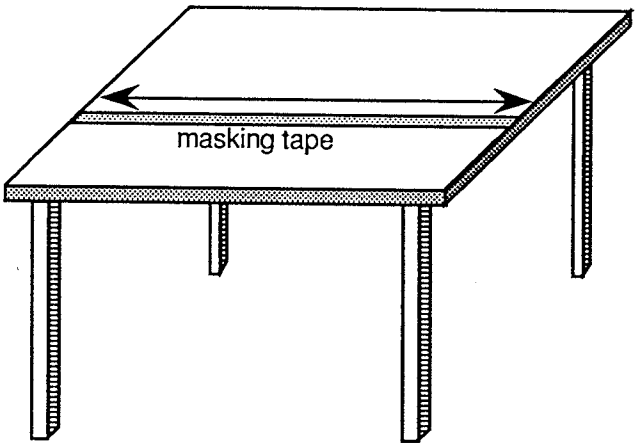
Chair



Bookshelves

name_____

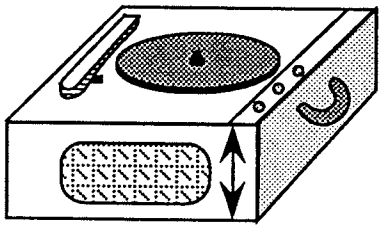
Which String?



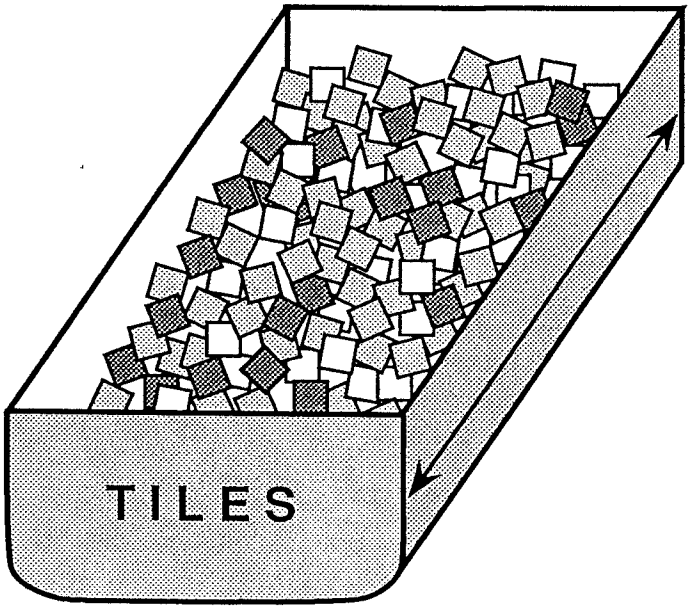
A table

Sun.	Mon.	Tues.	Wed.	Thur.	Fri.	Sat.
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16				

A calendar

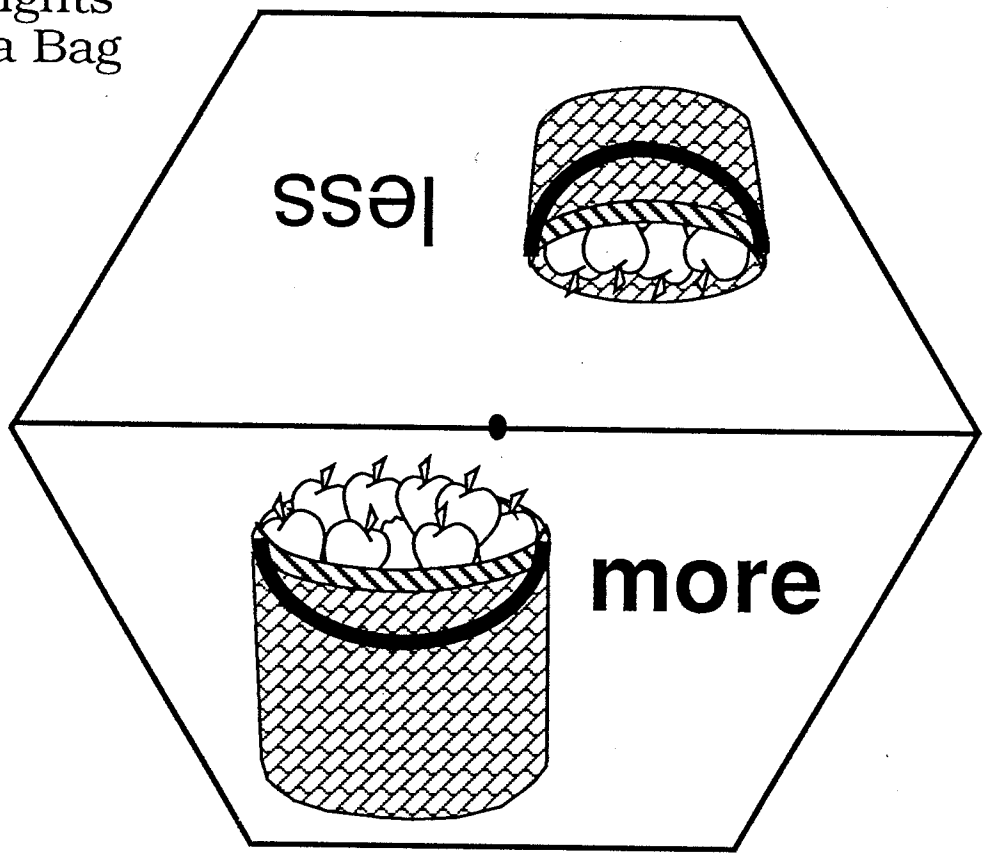


Record player

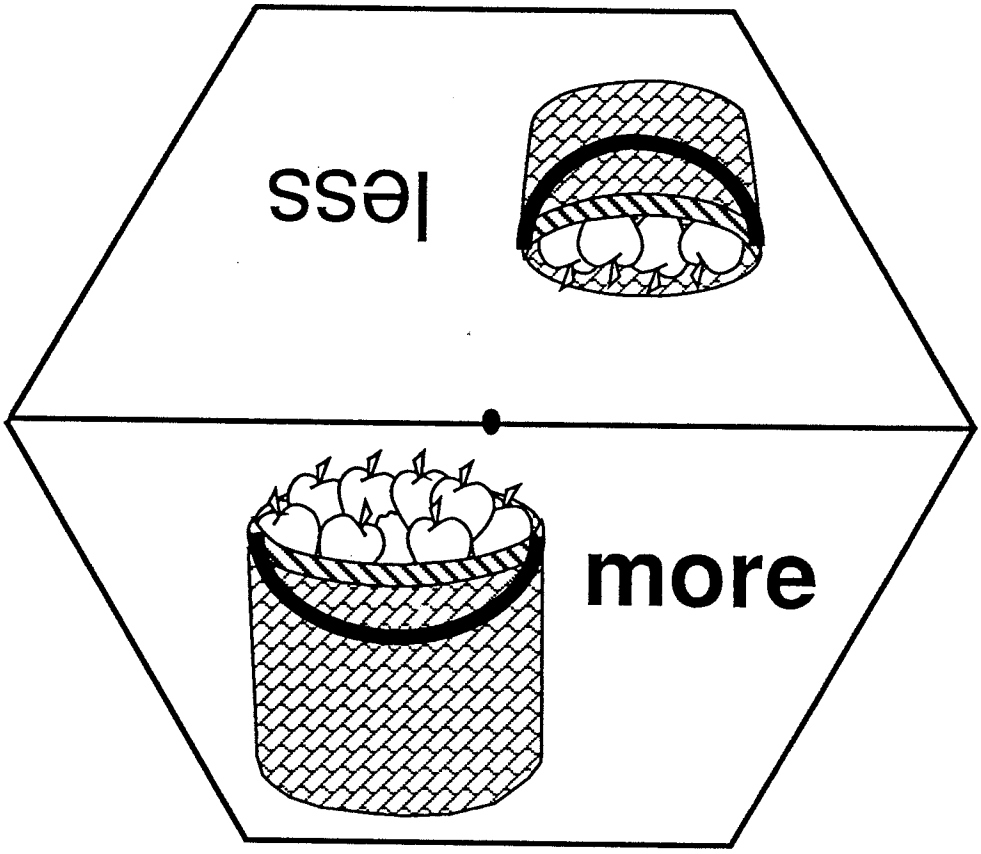


Tile tub

Weights in a Bag

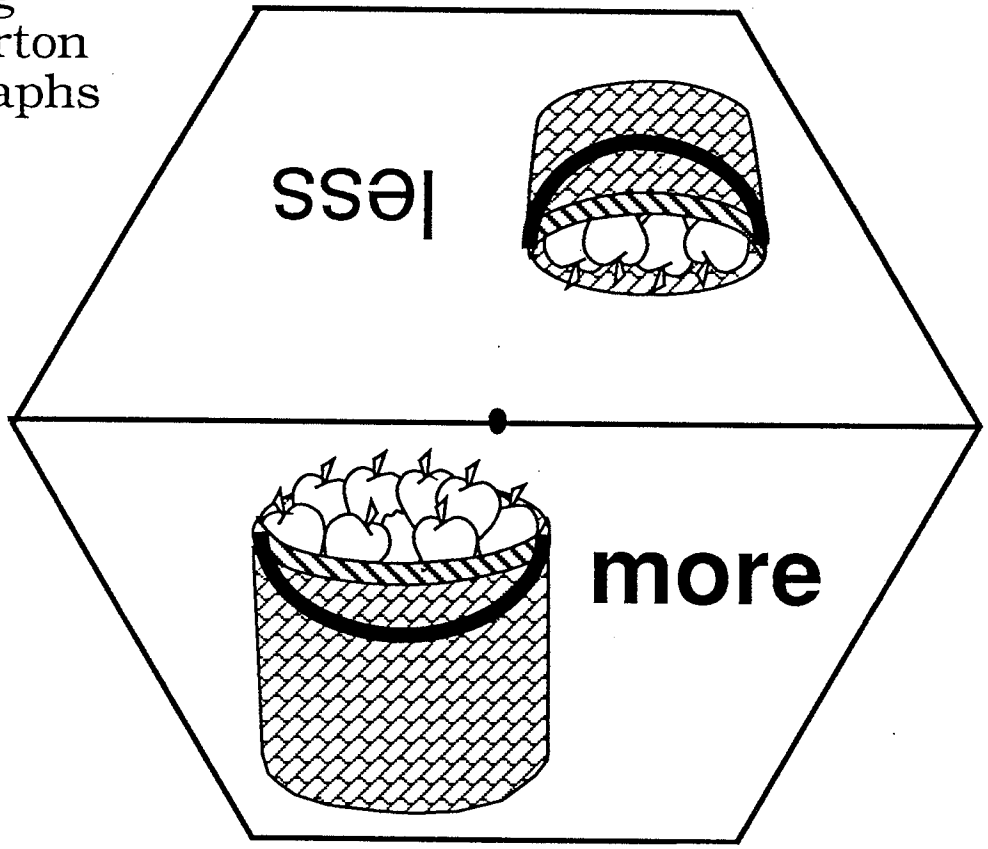


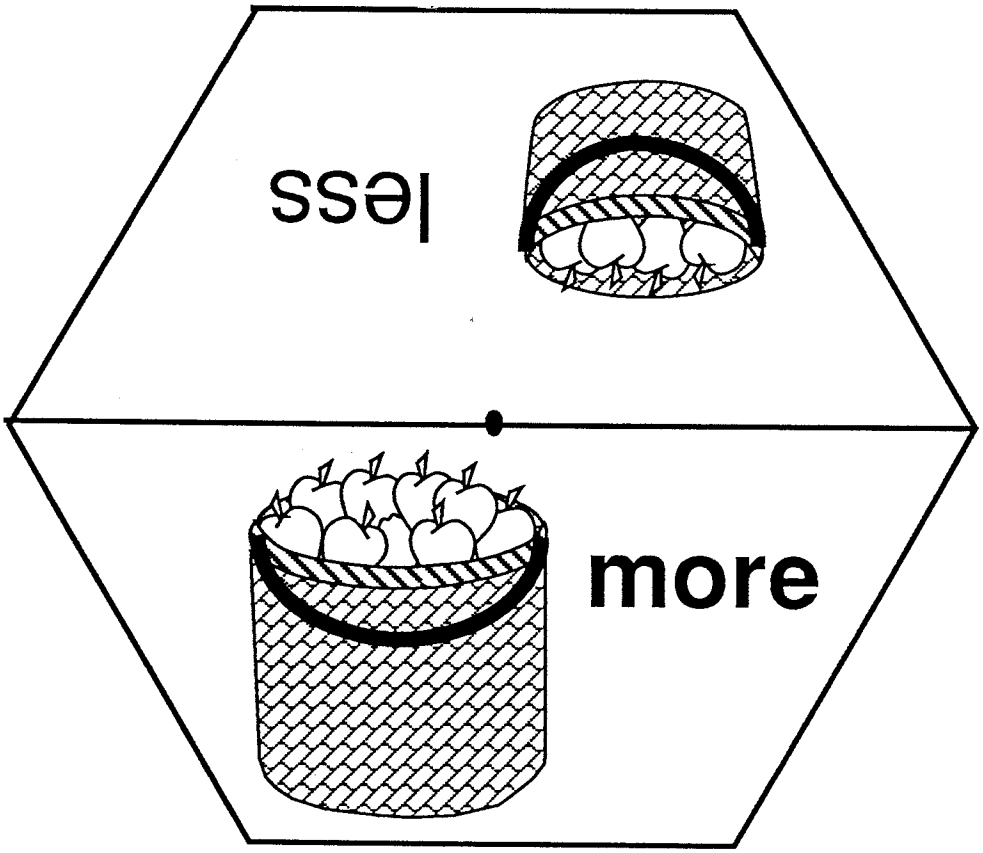
Sticks in a Bag



More/Less Spinners

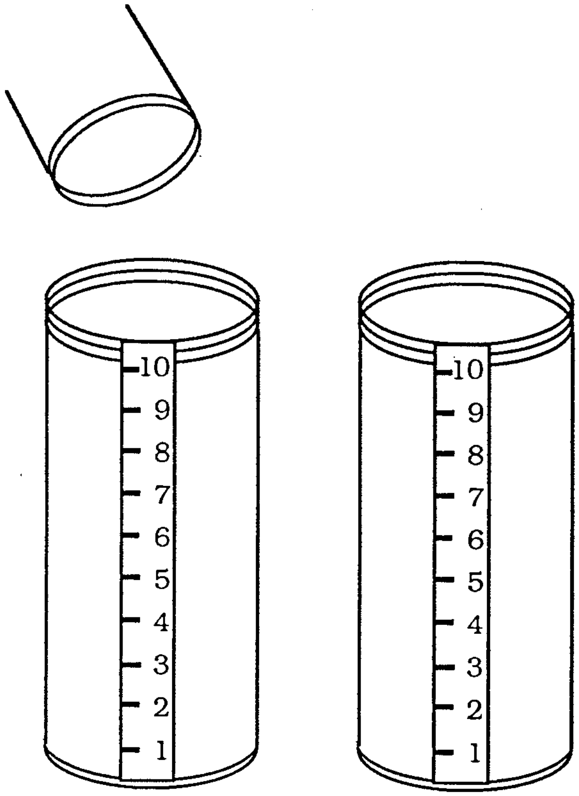
Egg Carton Graphs



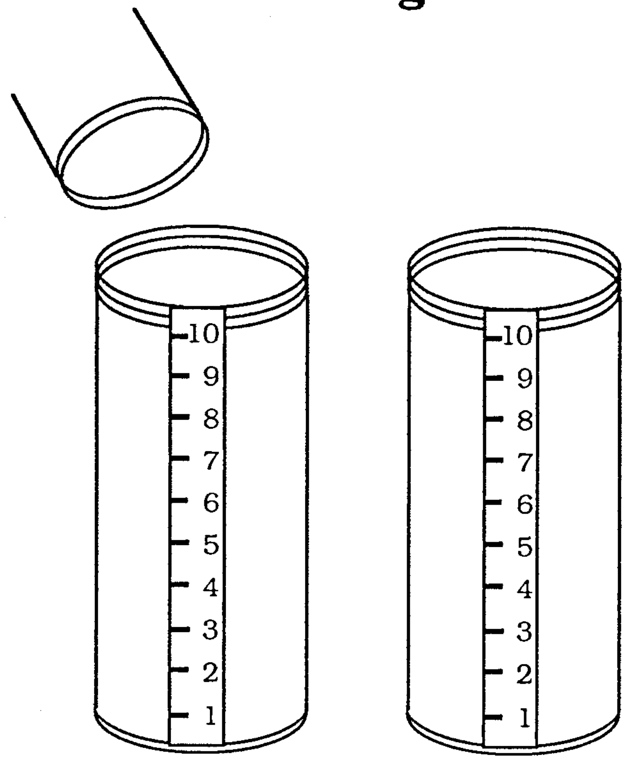


Ziplocks and Graphs

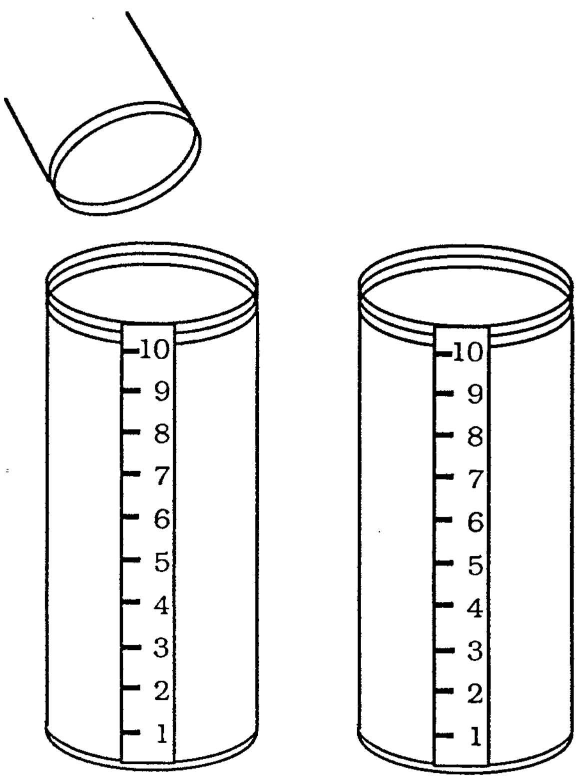
The Measuring Jar



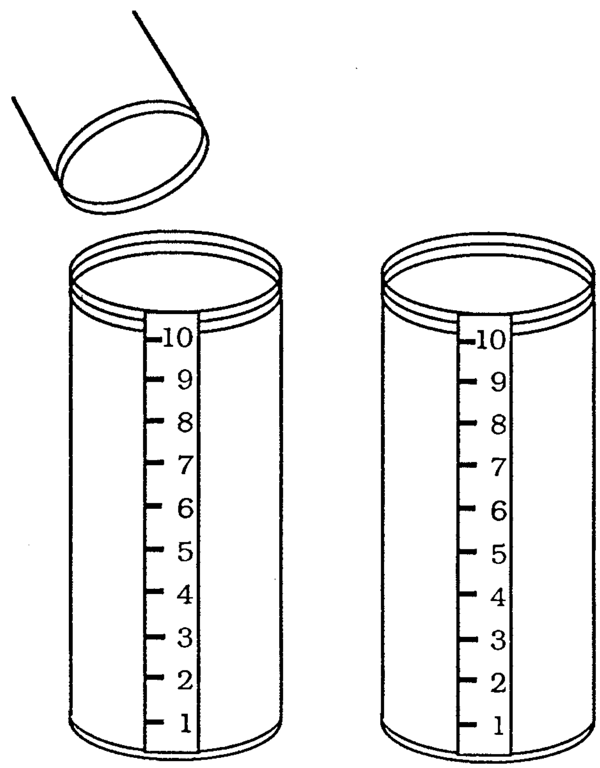
GUESS CHECK



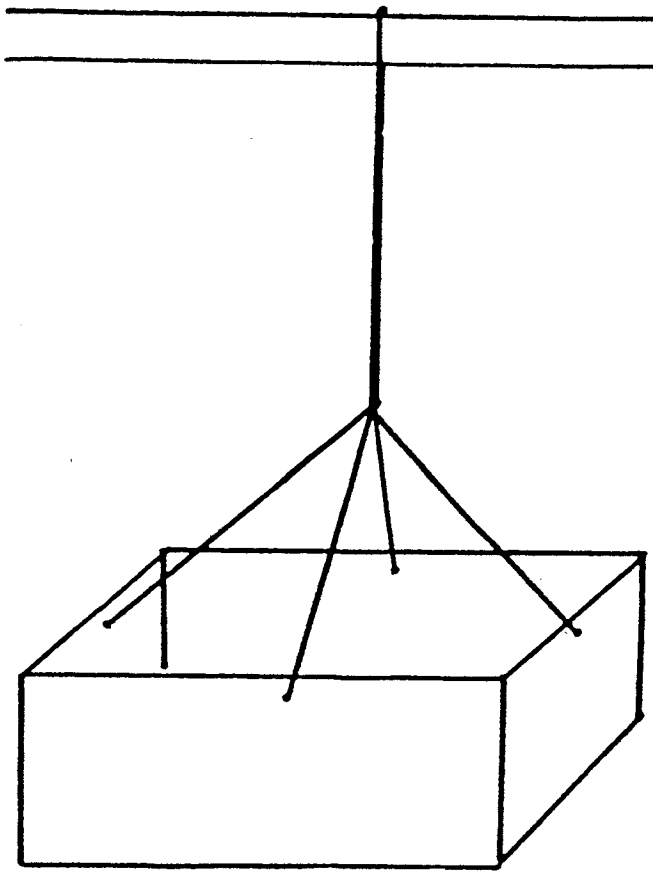
GUESS CHECK



GUESS CHECK



GUESS CHECK



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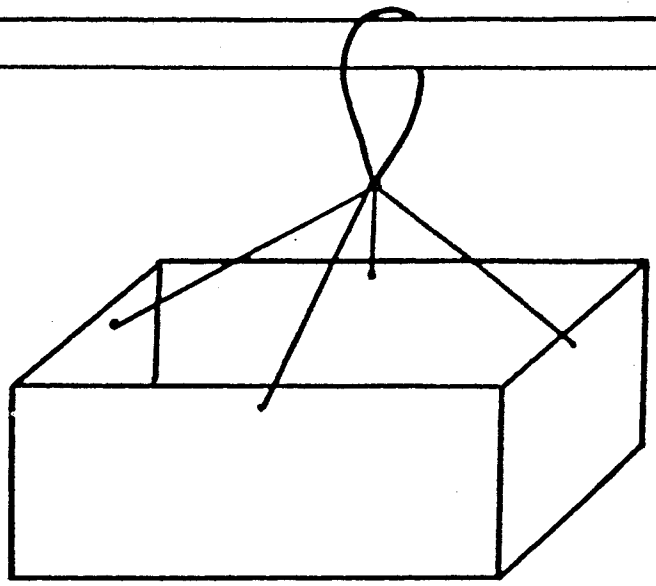

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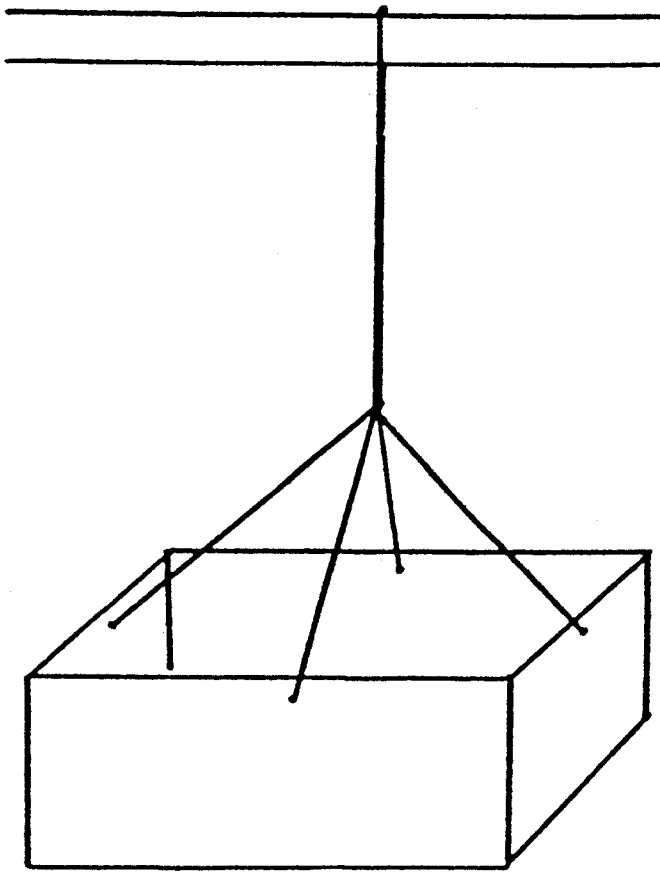
Weighing Record Cards



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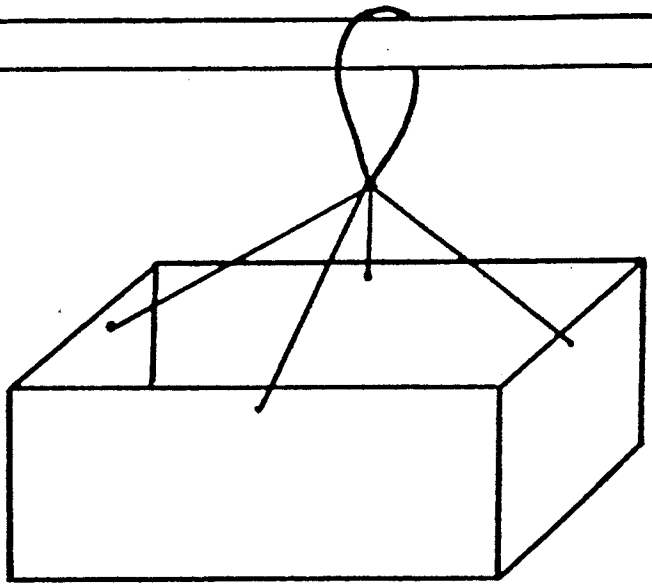

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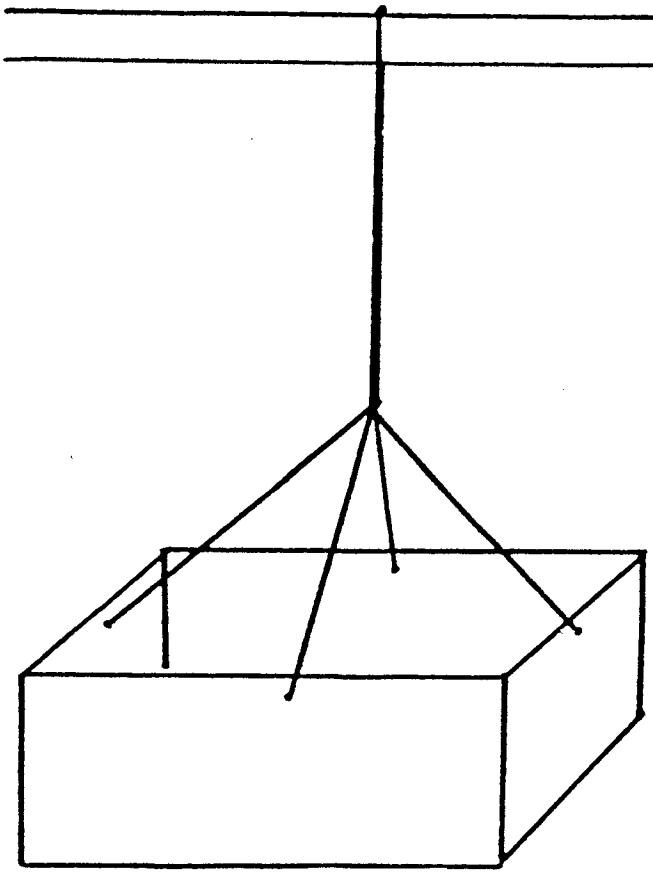
Weighing Record Cards



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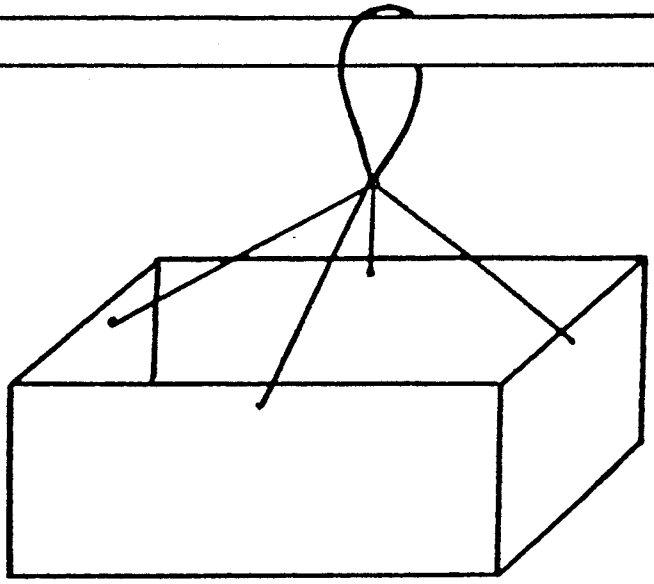

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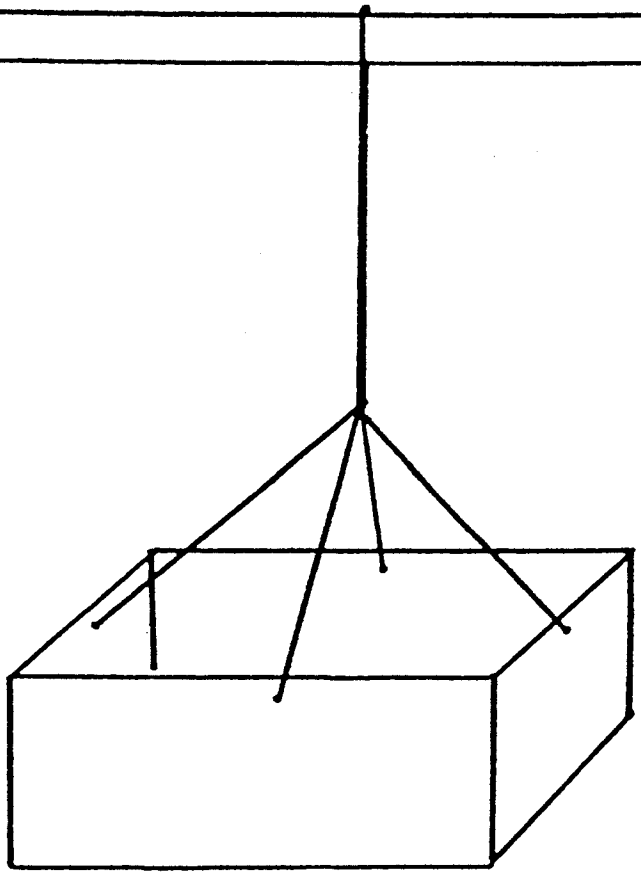
Weighing Record Cards



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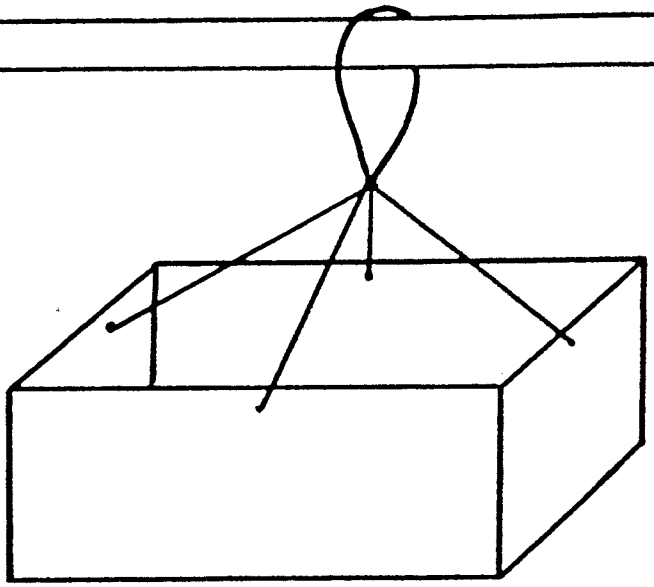

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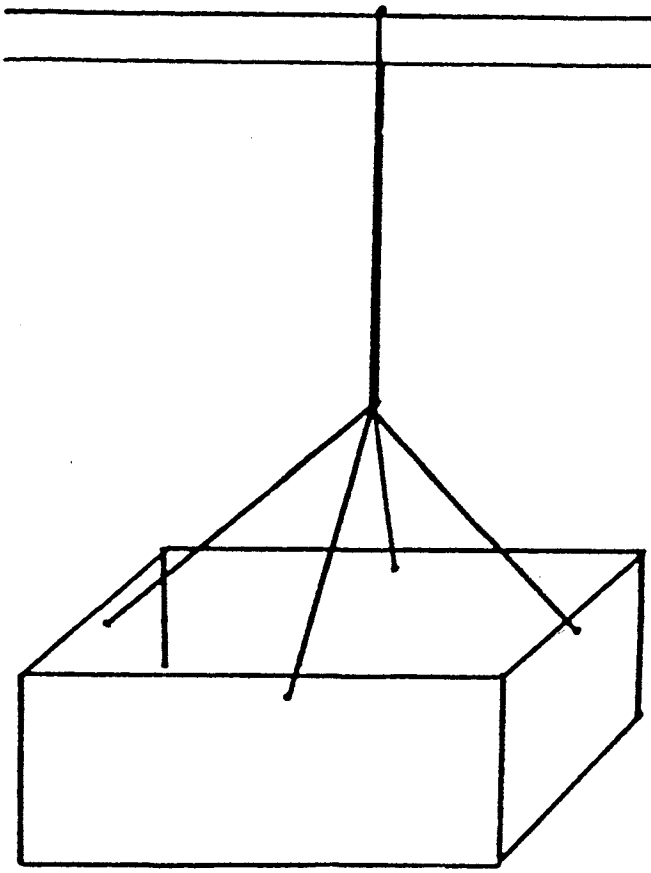
Weighing Record Cards



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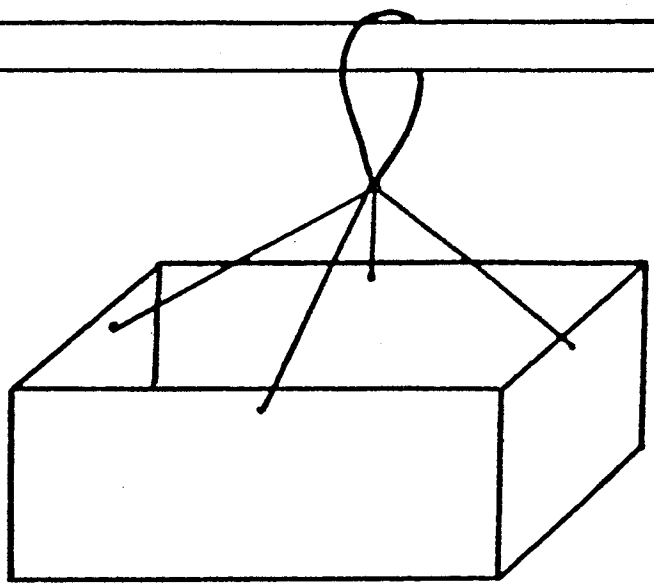

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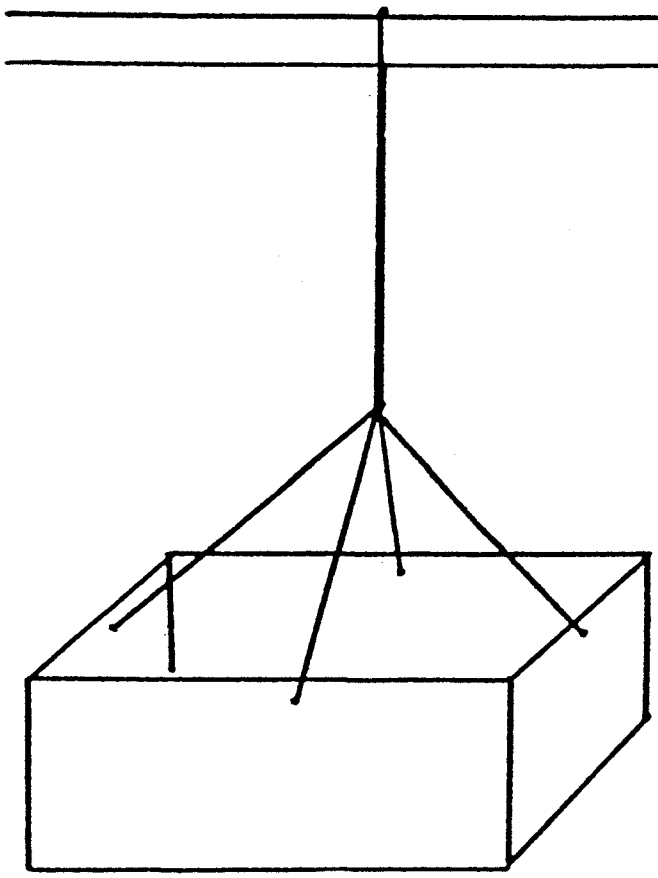
Weighing Record Cards



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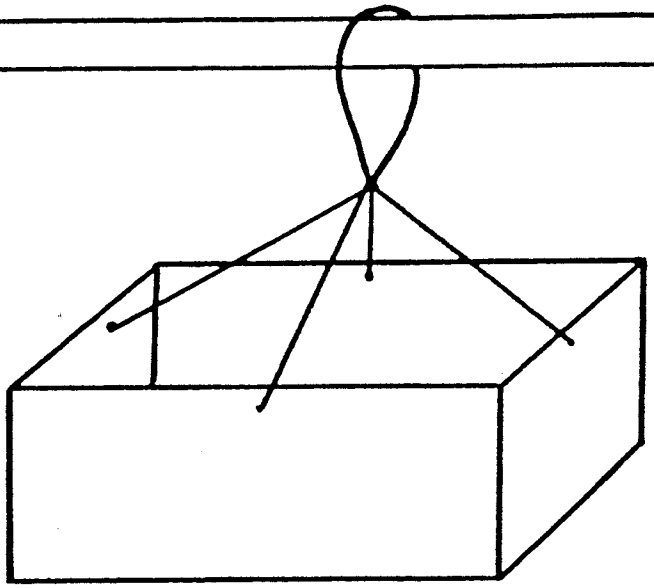

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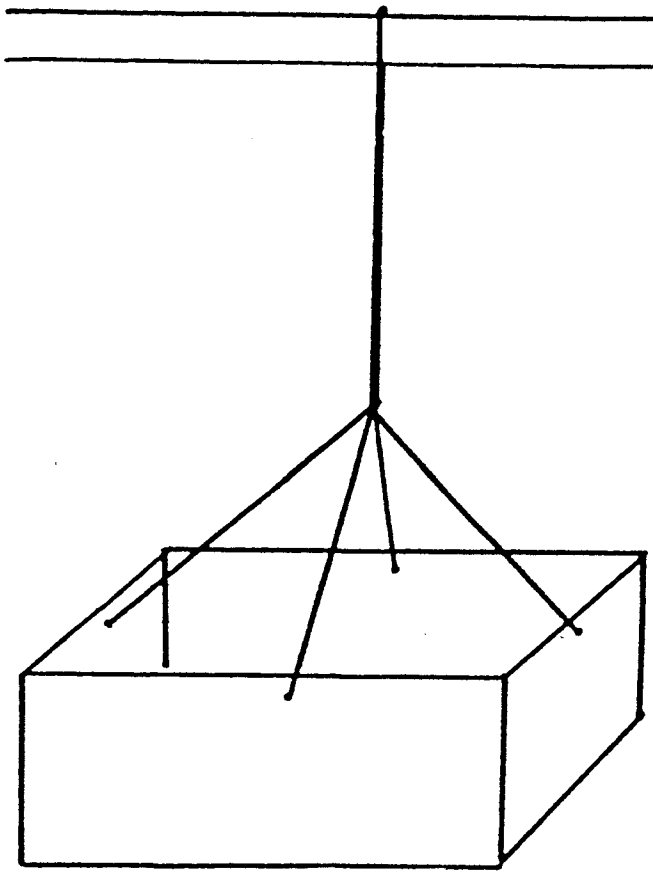
Weighing Record Cards



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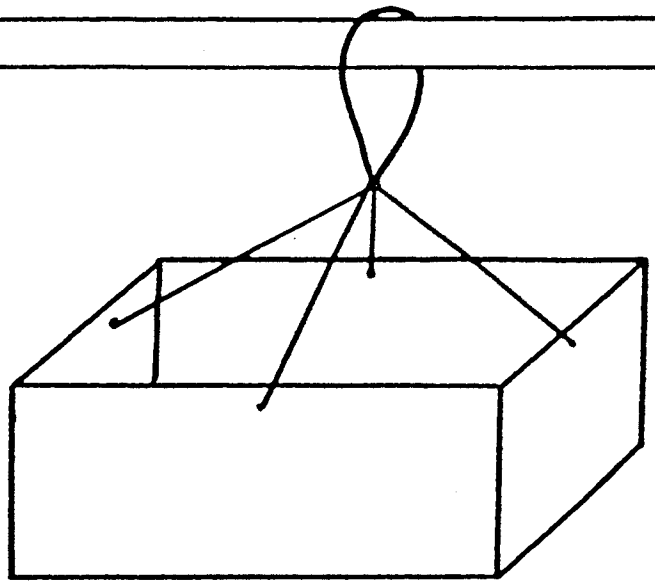
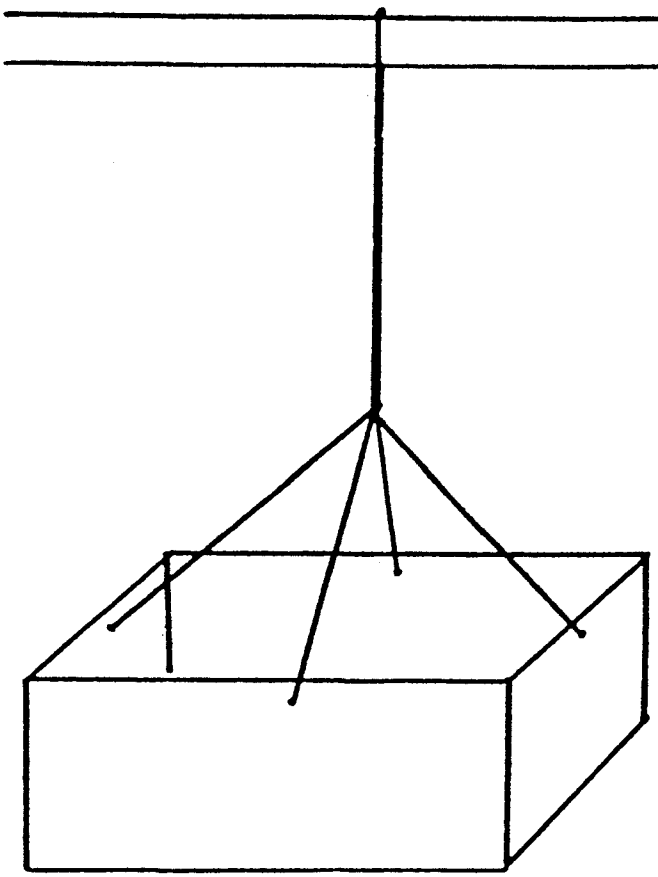
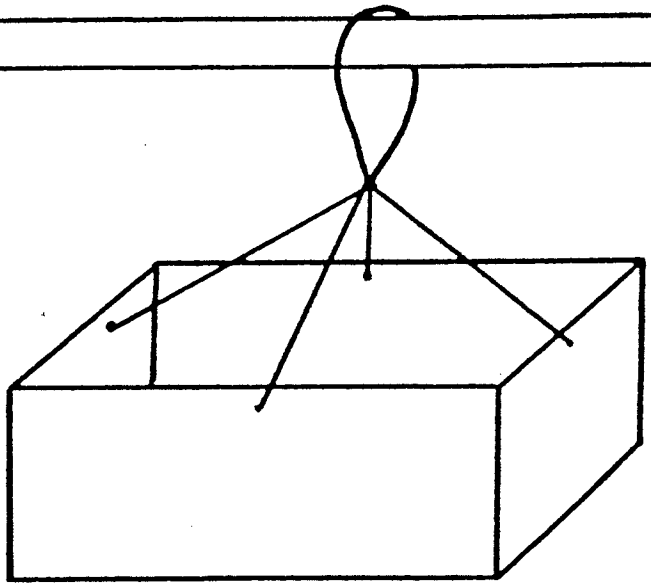


lighter

Weighing Record Cards

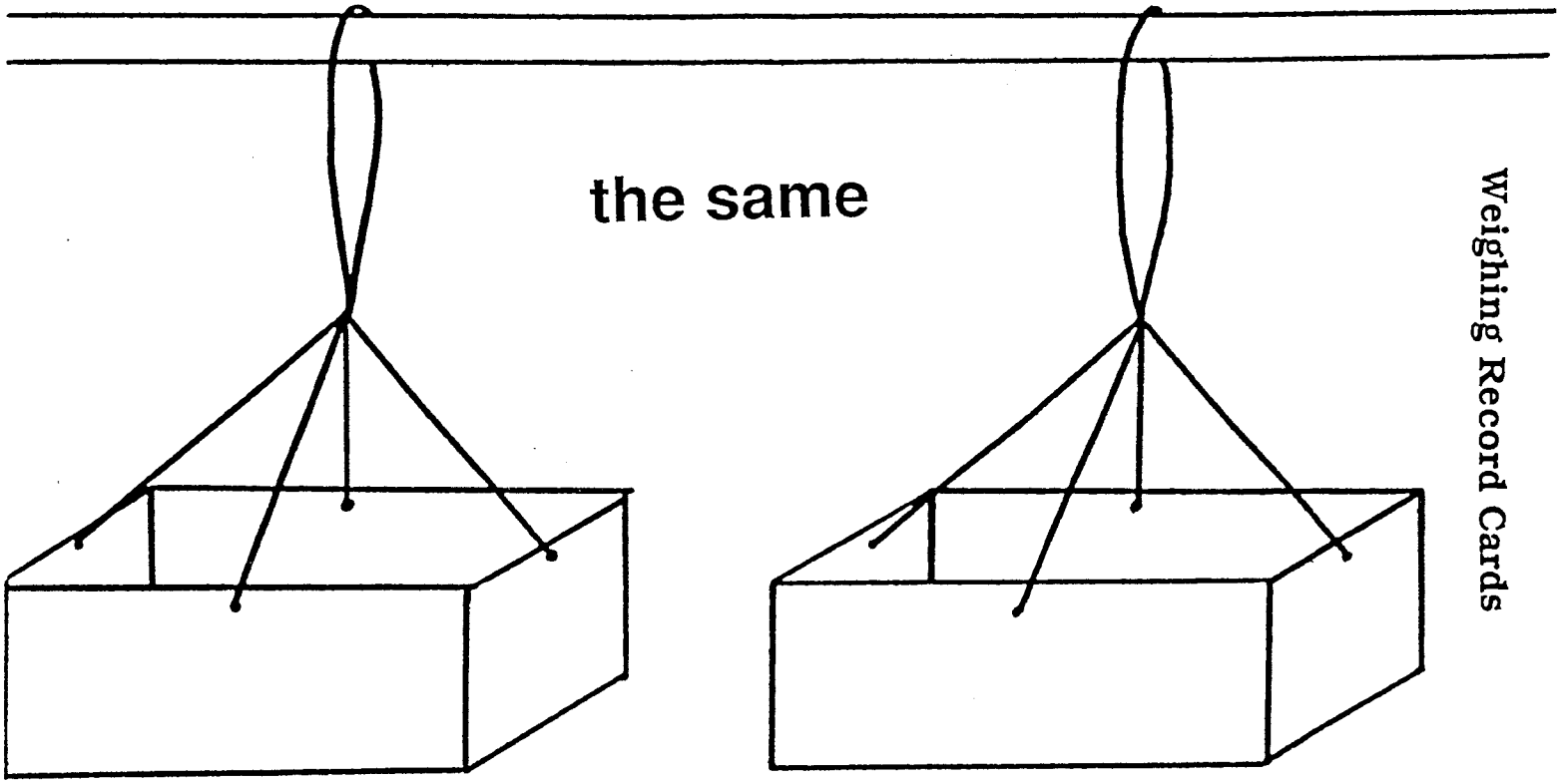


heavier



lighter

Weighing Record Cards



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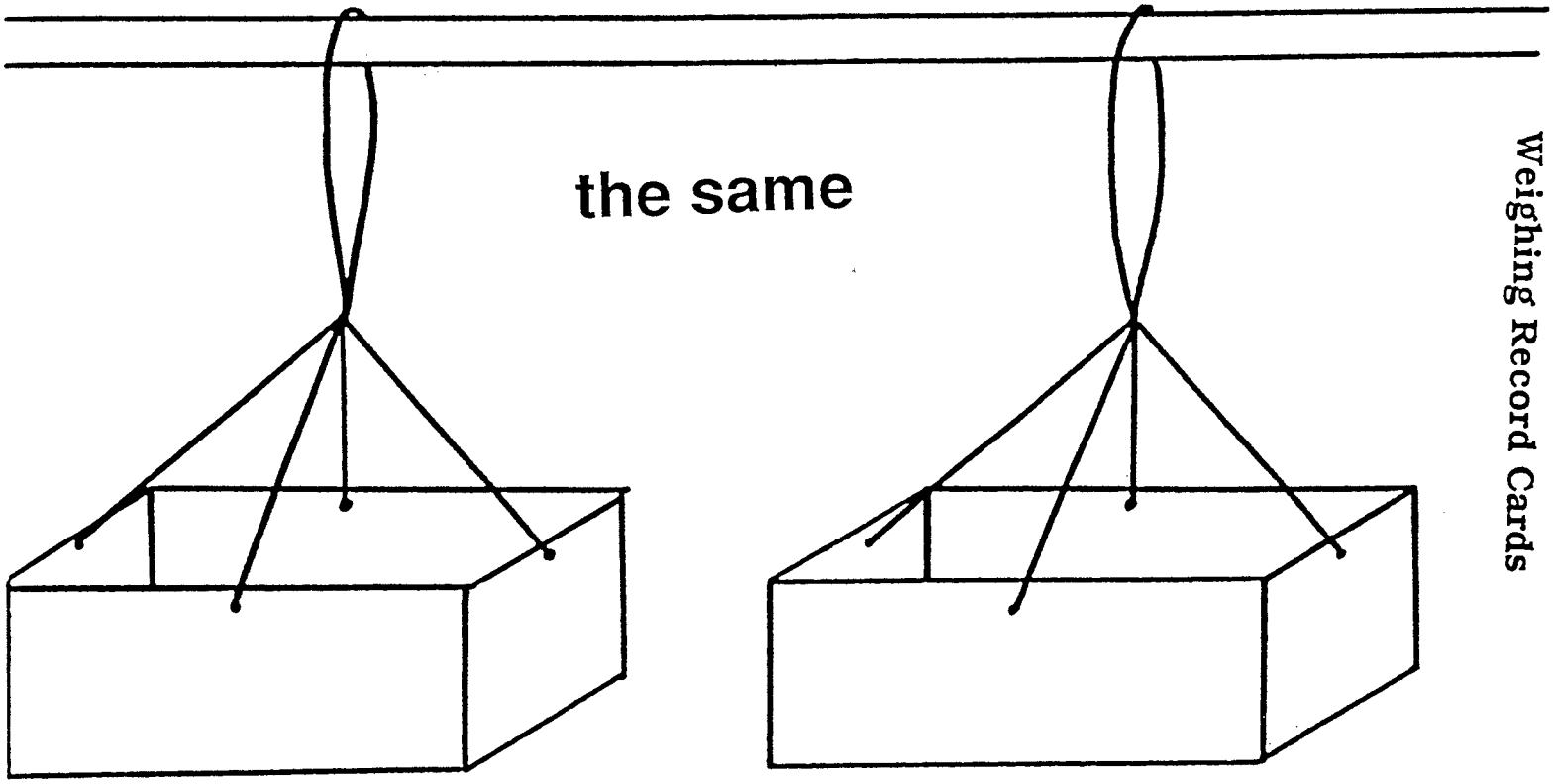
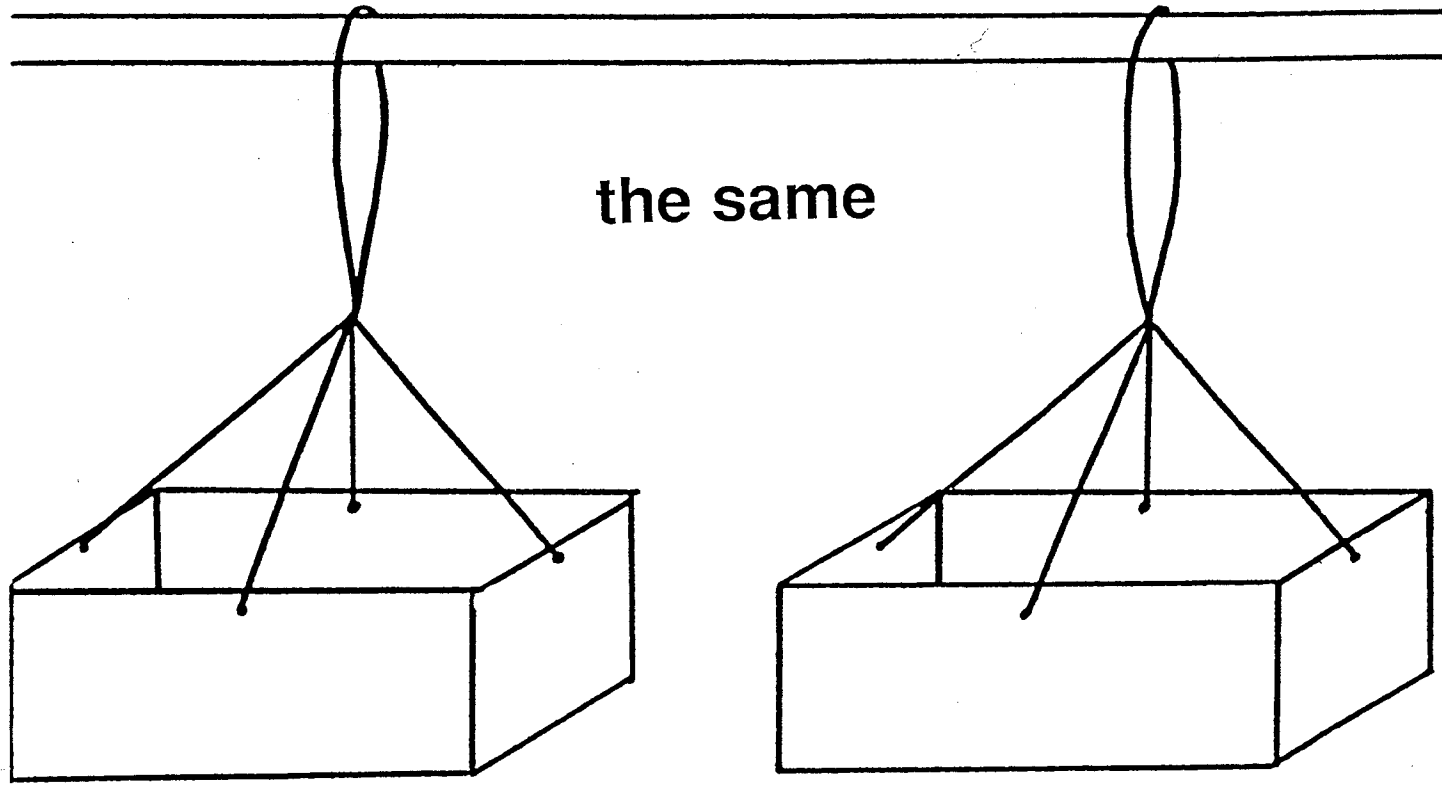


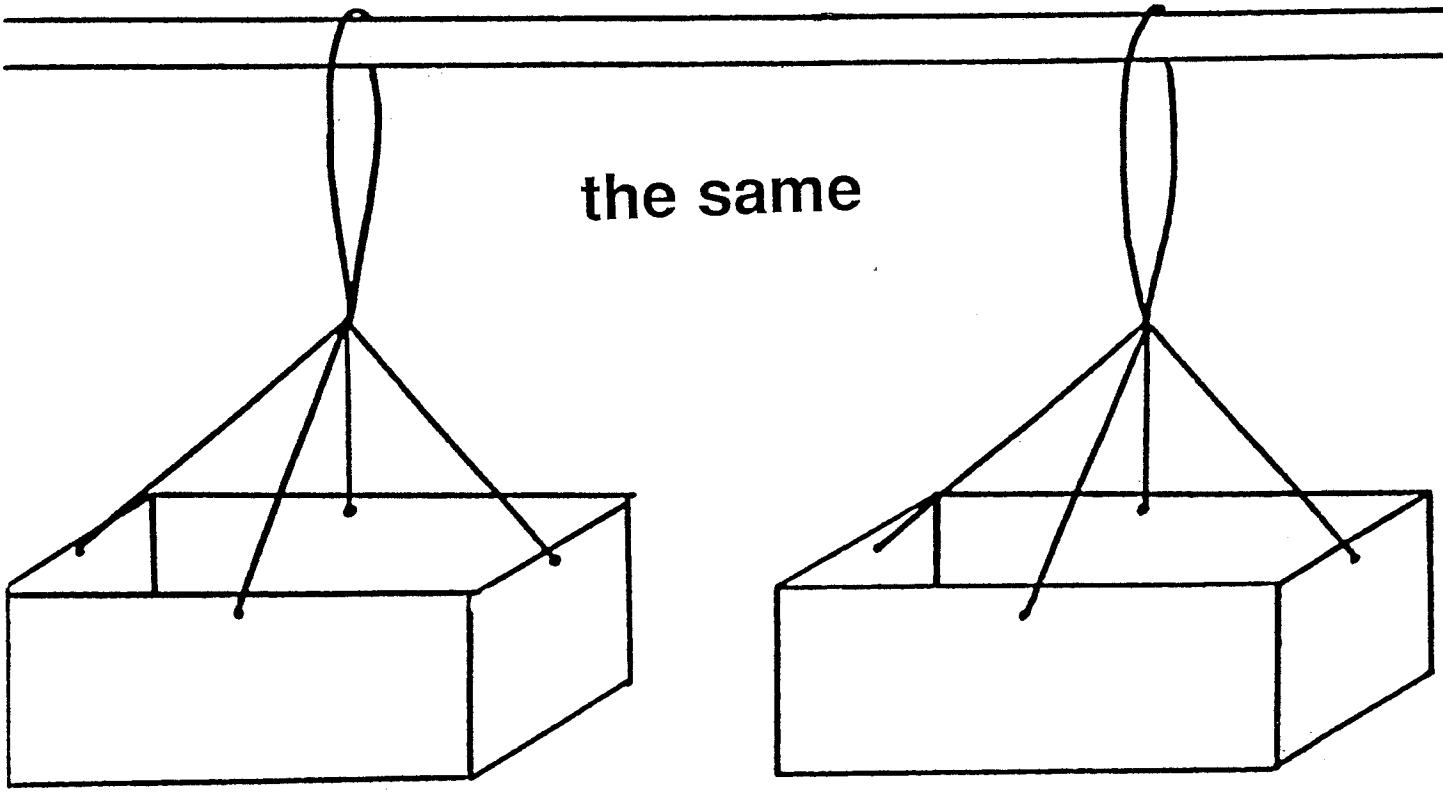
Weighing Record Cards

the same



Weighing Record Cards

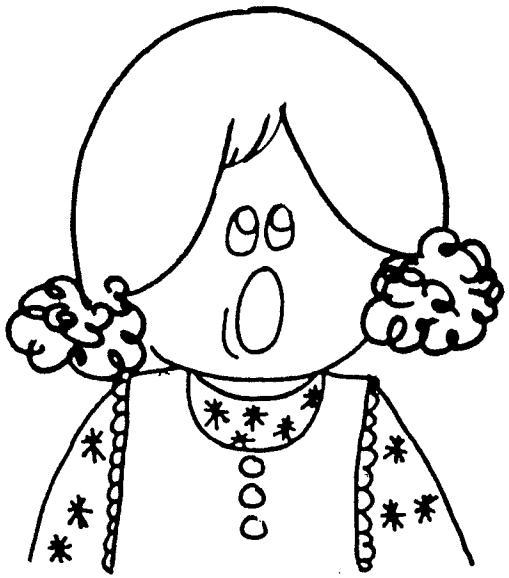
the same



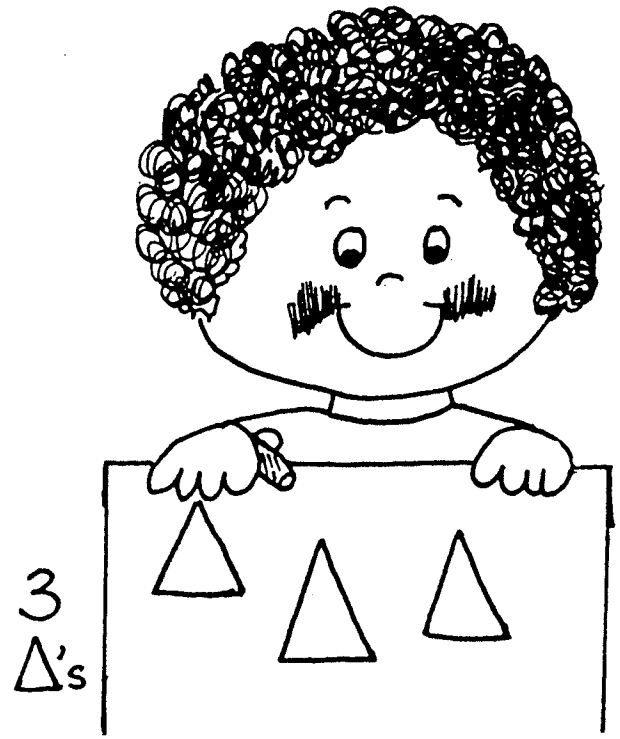
Weighing Record Cards

A B C D E F G H I J
K L M N O P Q R S T
U V W X
Y Z

1 2 3 4 5 6 7 8 9 10
11 12 13 14 15 16 17 18 19 20

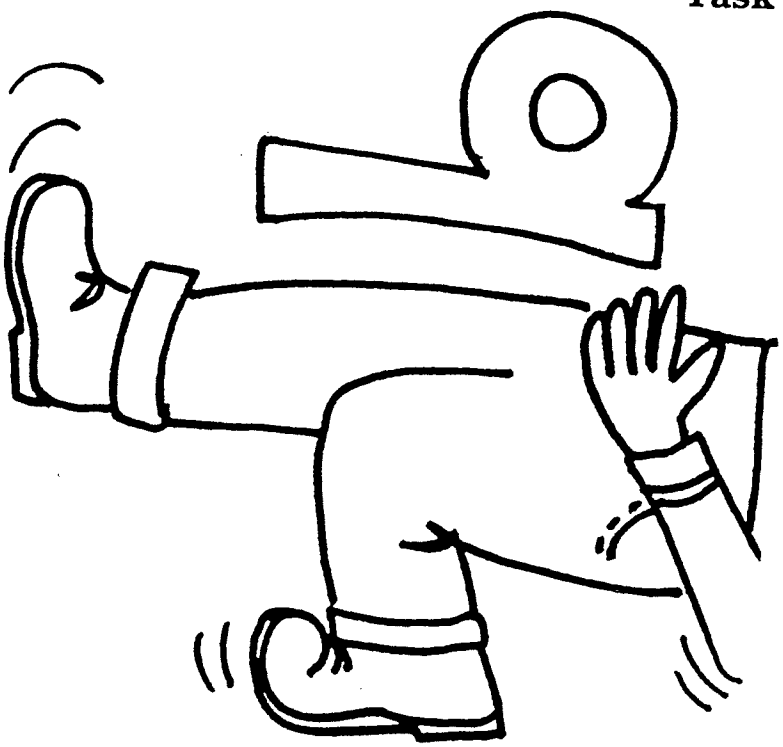


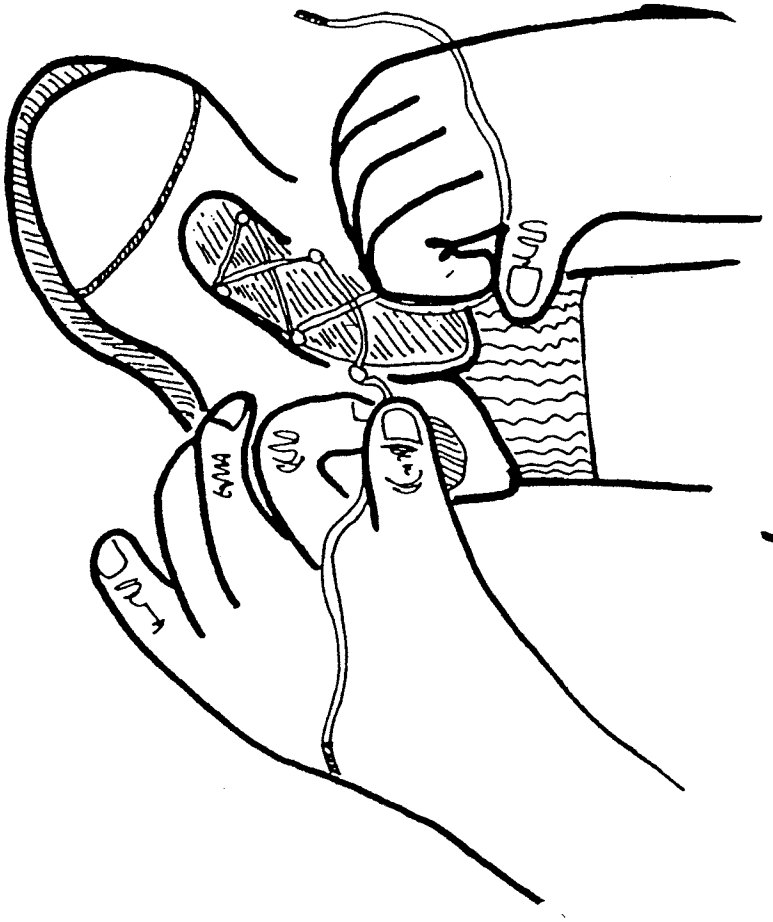
10 9 8 7 6
5 4 3 2 1

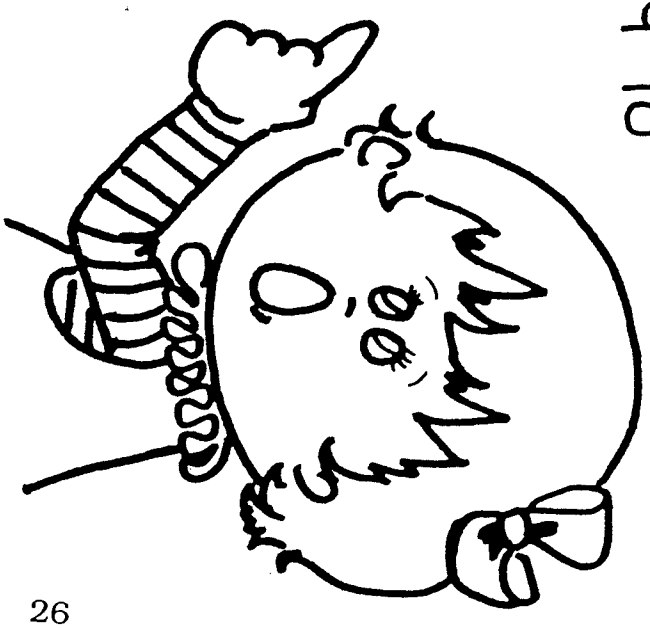


How Much Time?

Task Cards



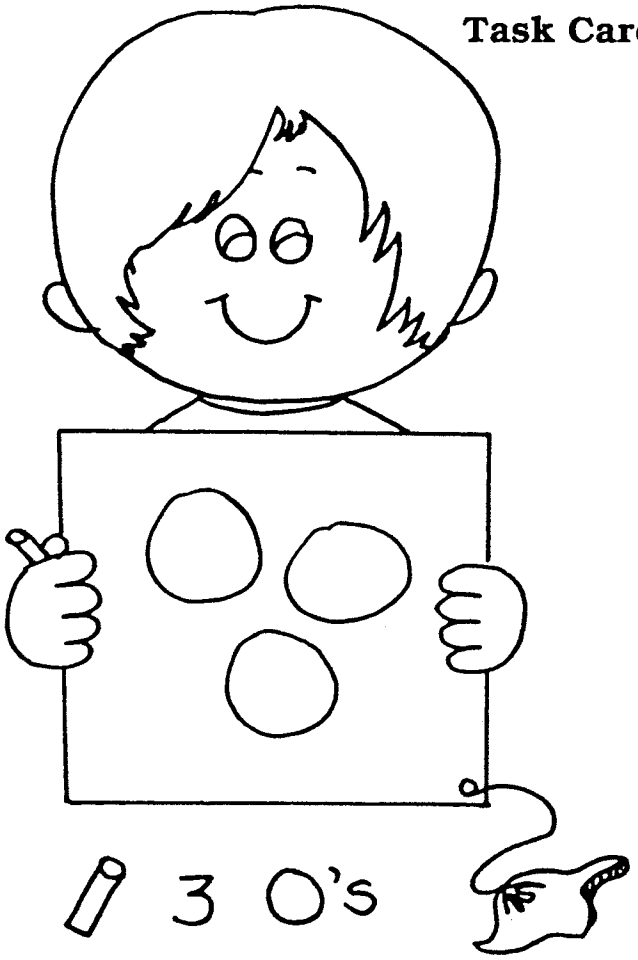


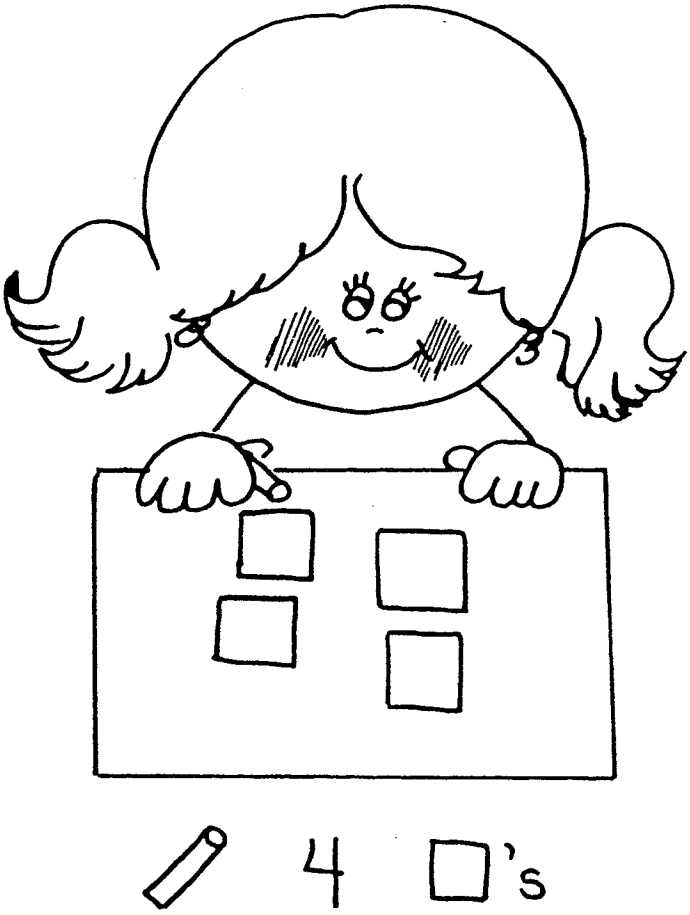


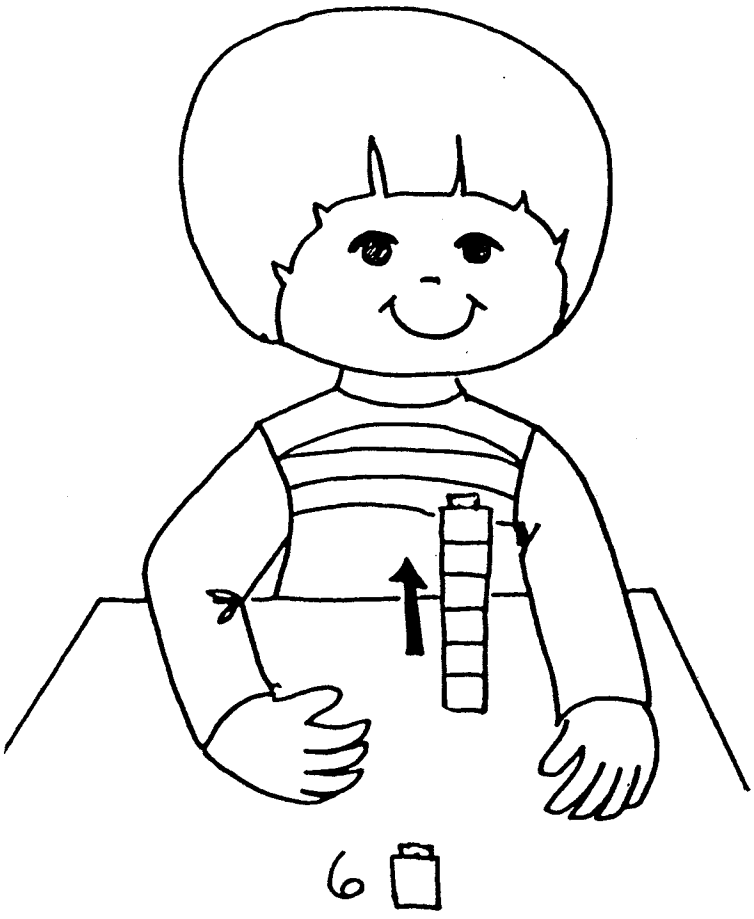
1 2 3 4 5
6 7 8 9 10

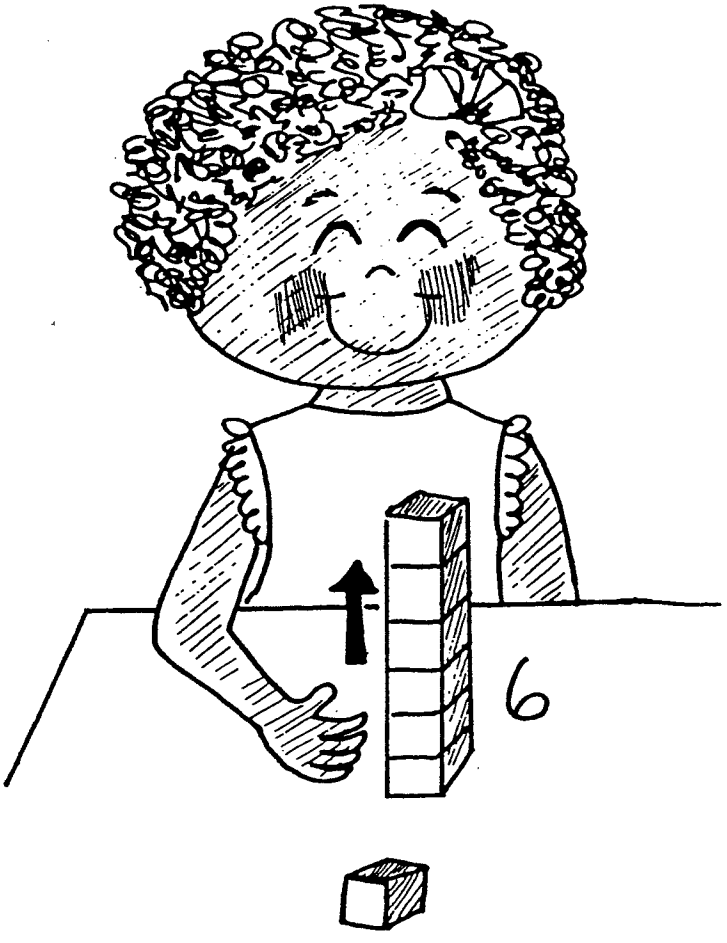
How Much Time?

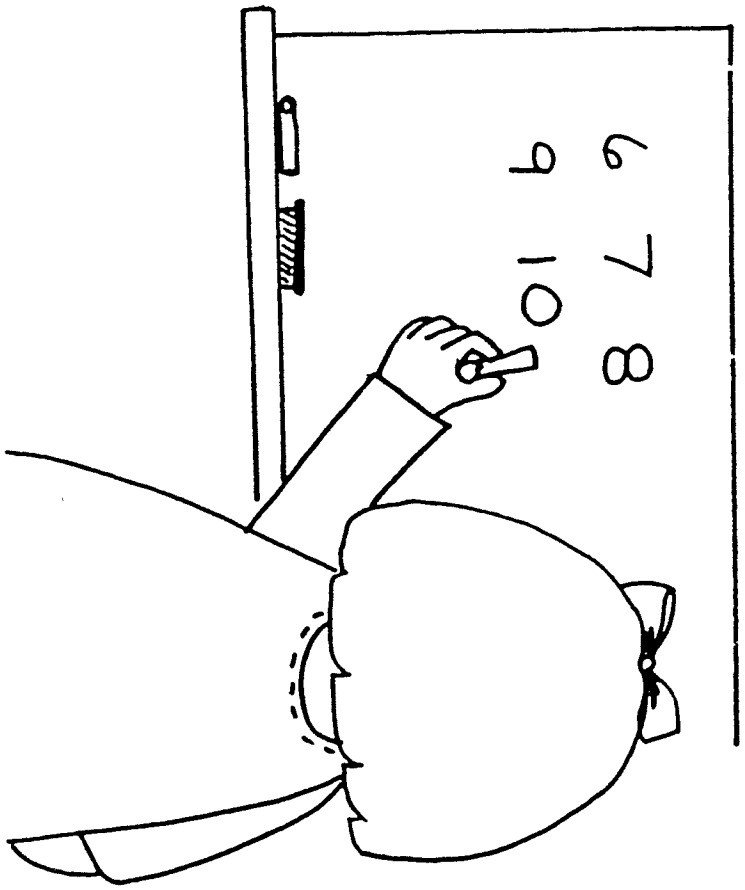
Task Cards

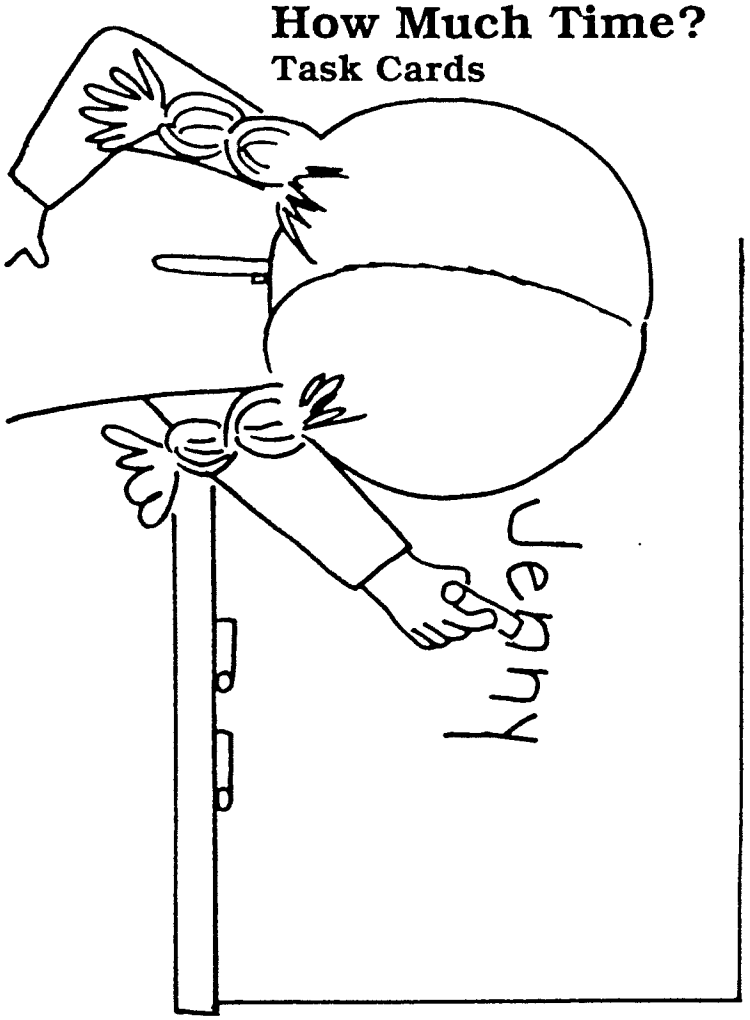


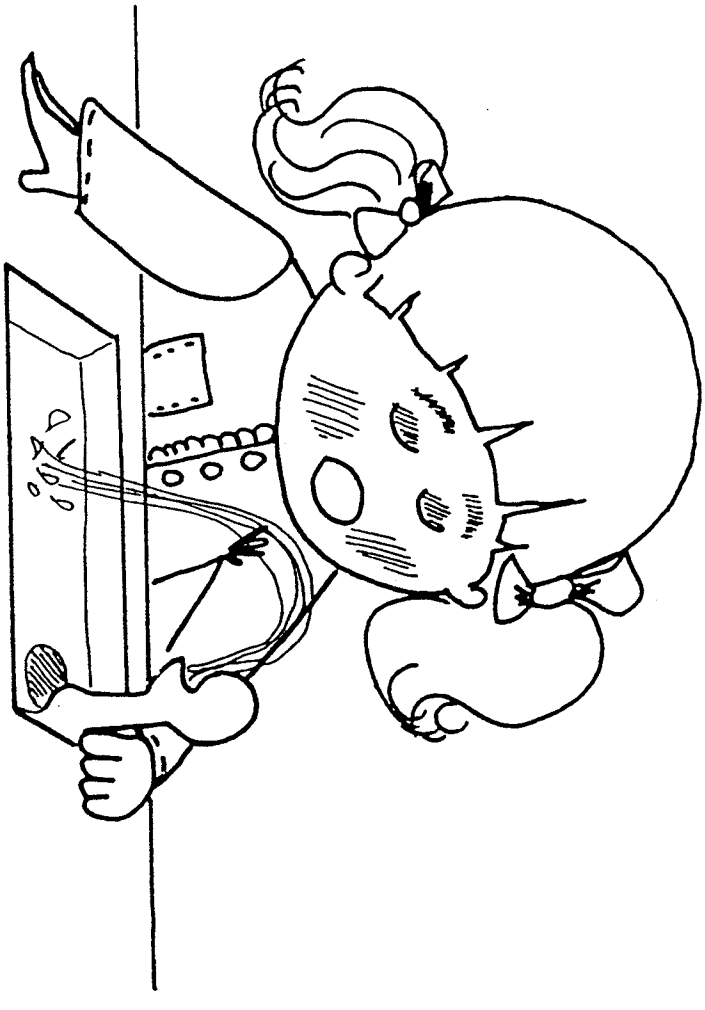


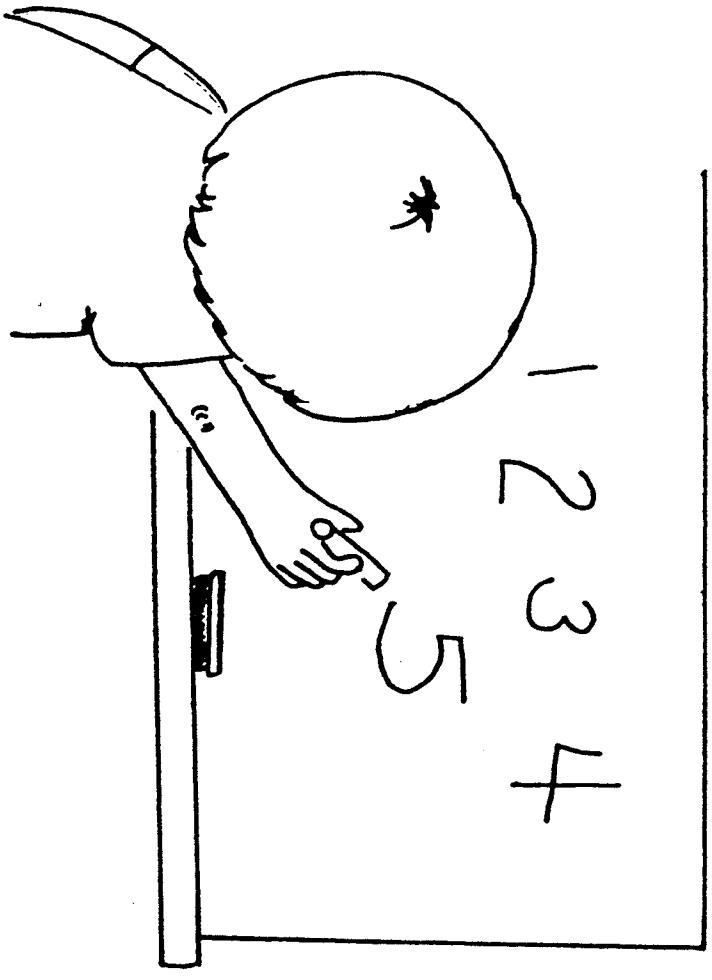





6 9
7 8
10


Jenny

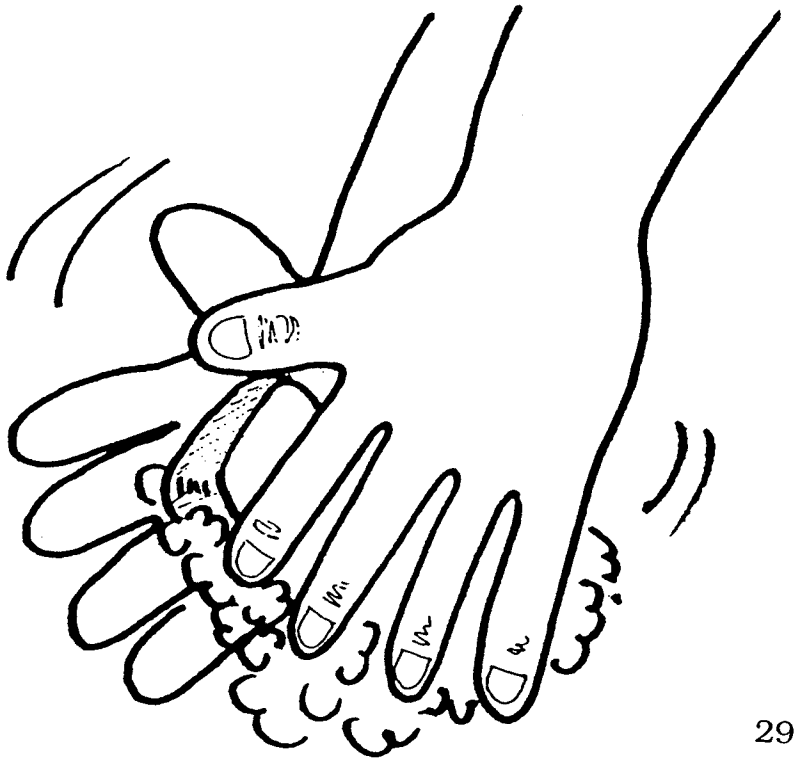



1
2
3
4
5

How Much Time?

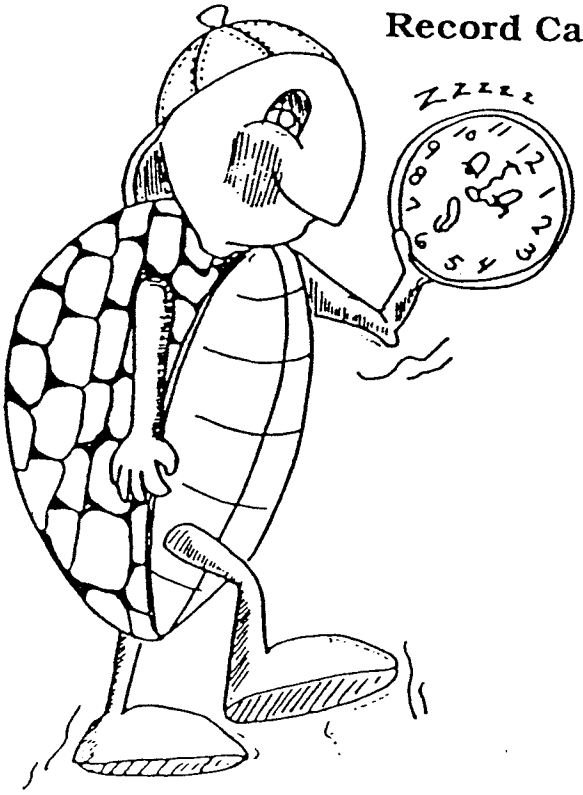
Task Cards

10

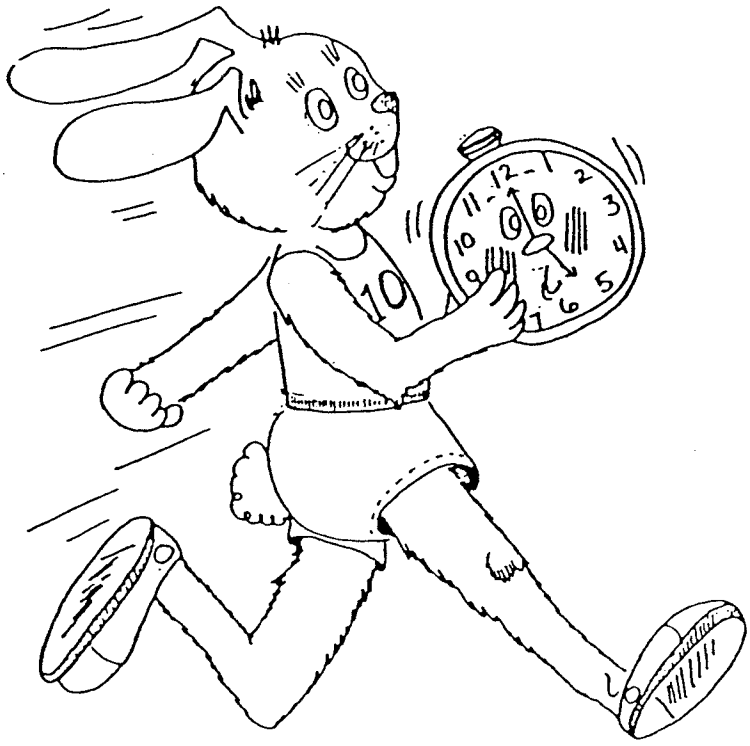


How Much Time?

Record Cards



more time



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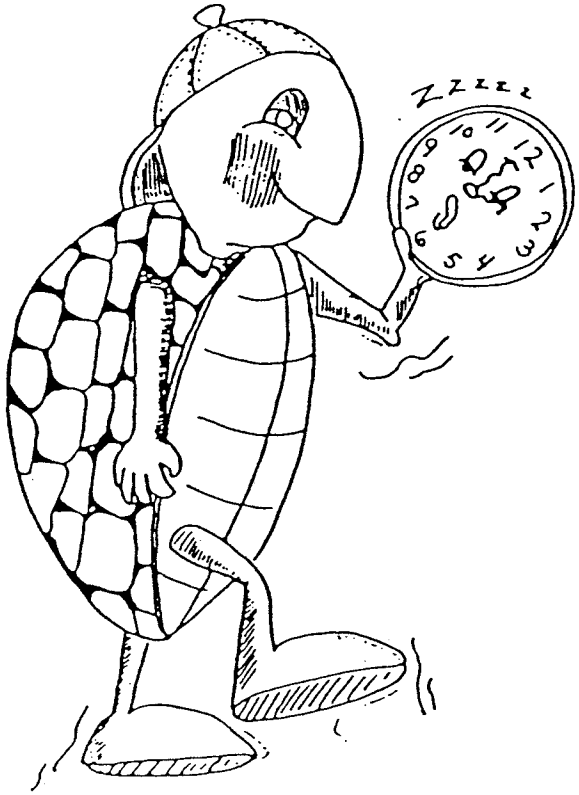

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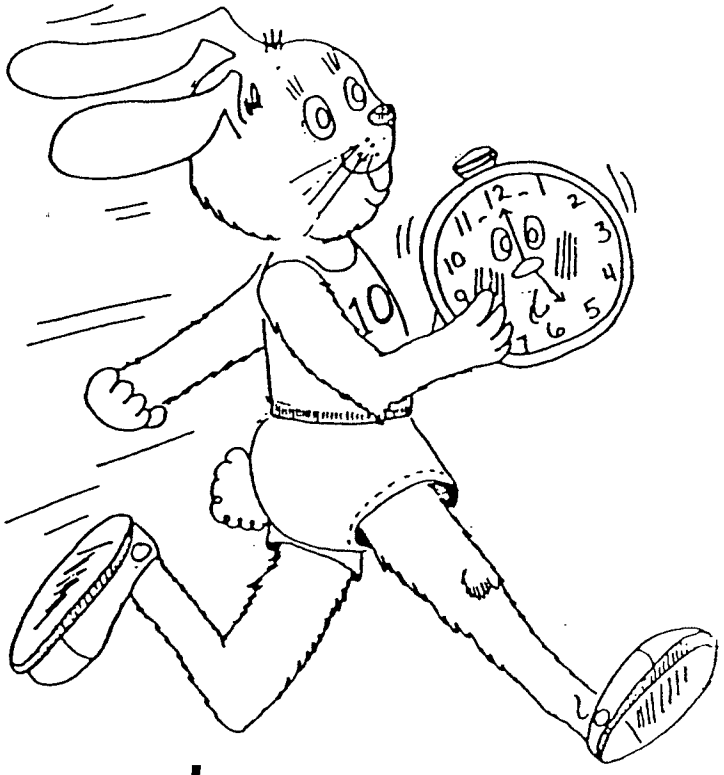
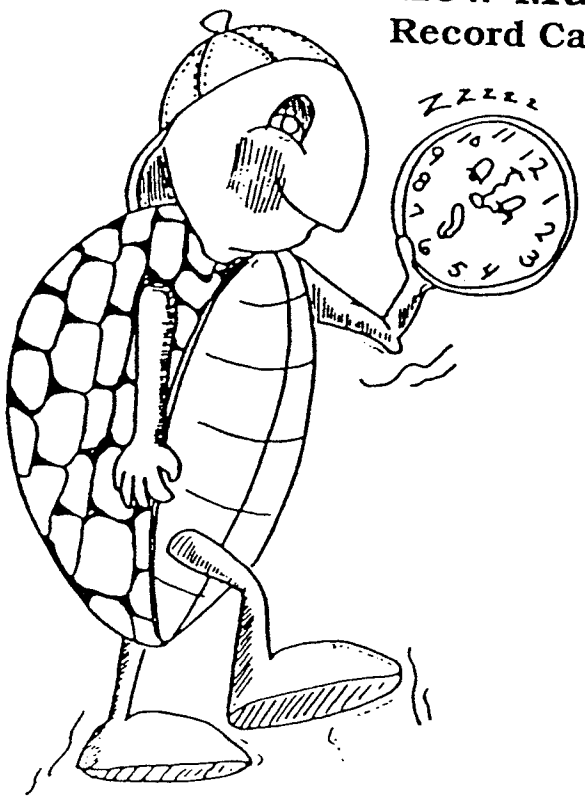


less time

How Much Time?

Record Cards



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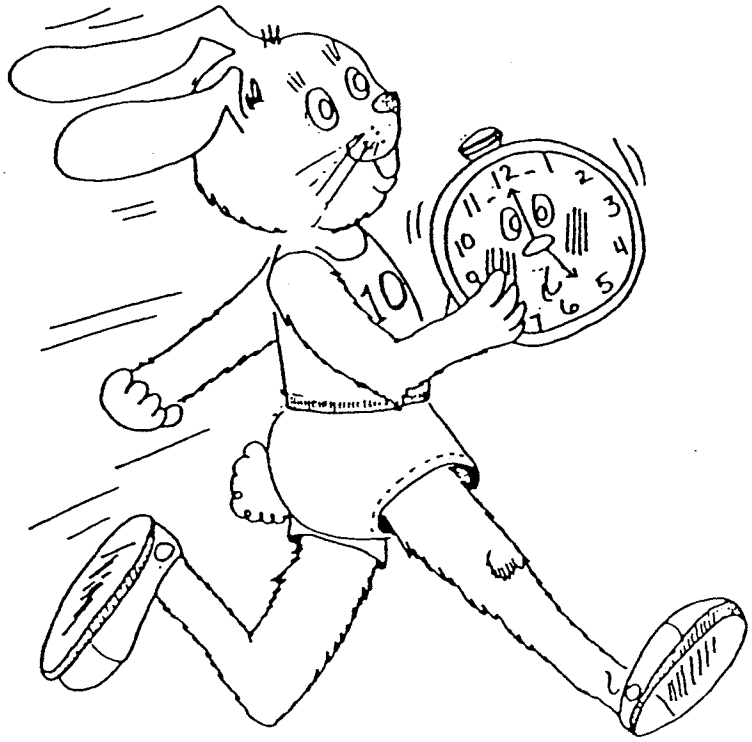

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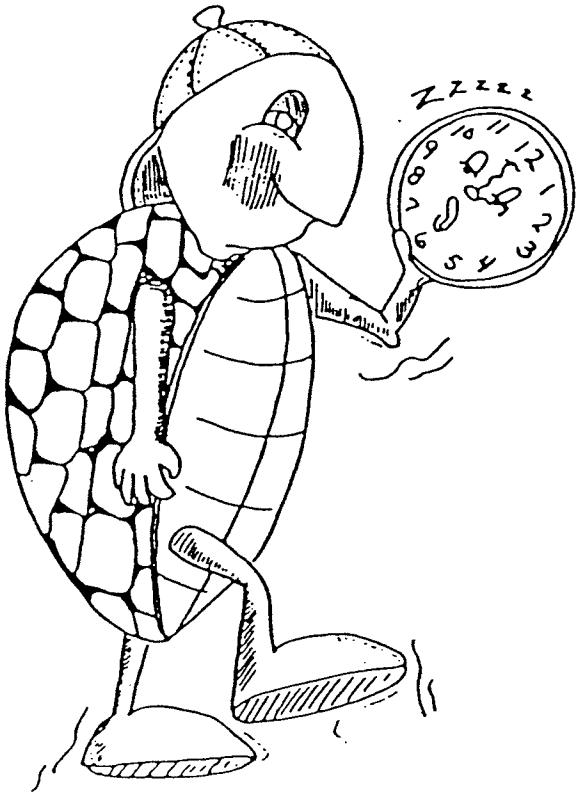

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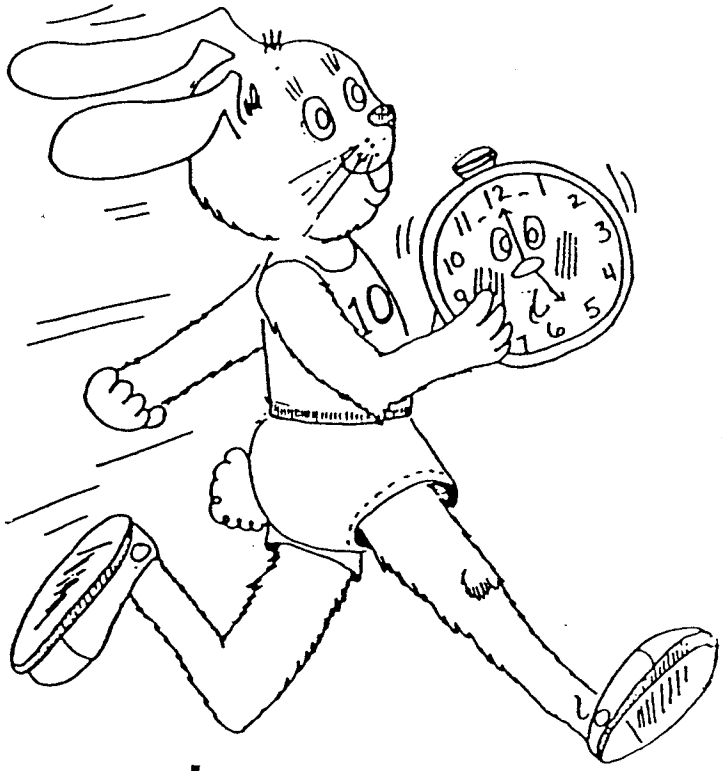
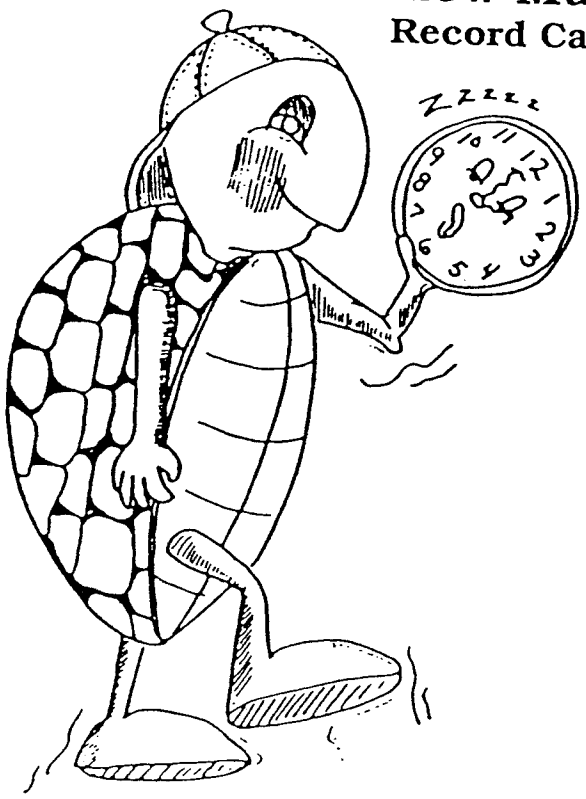


less time

How Much Time?

Record Cards



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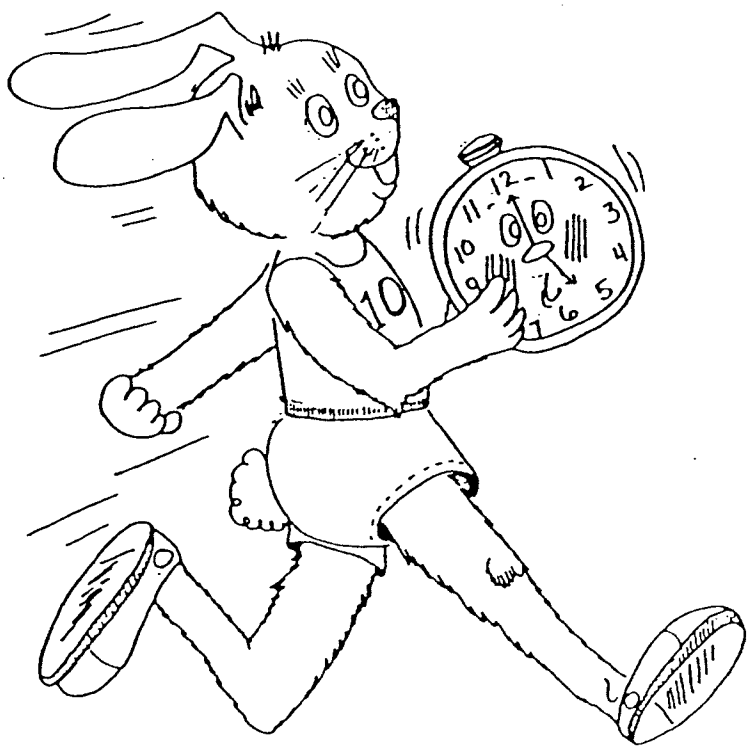

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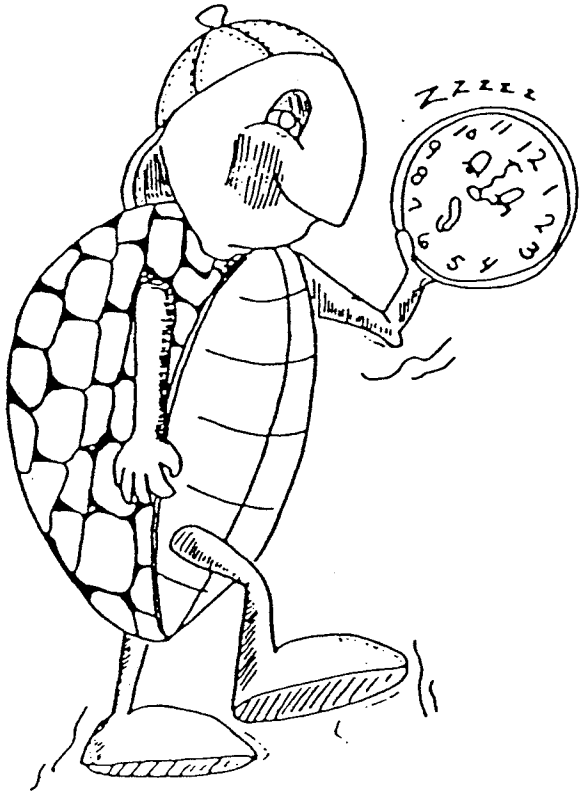

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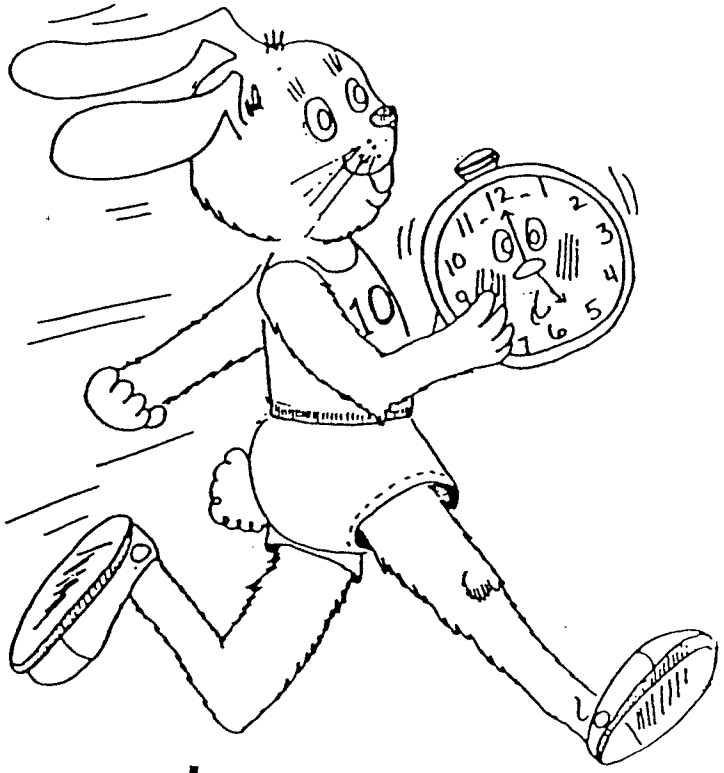
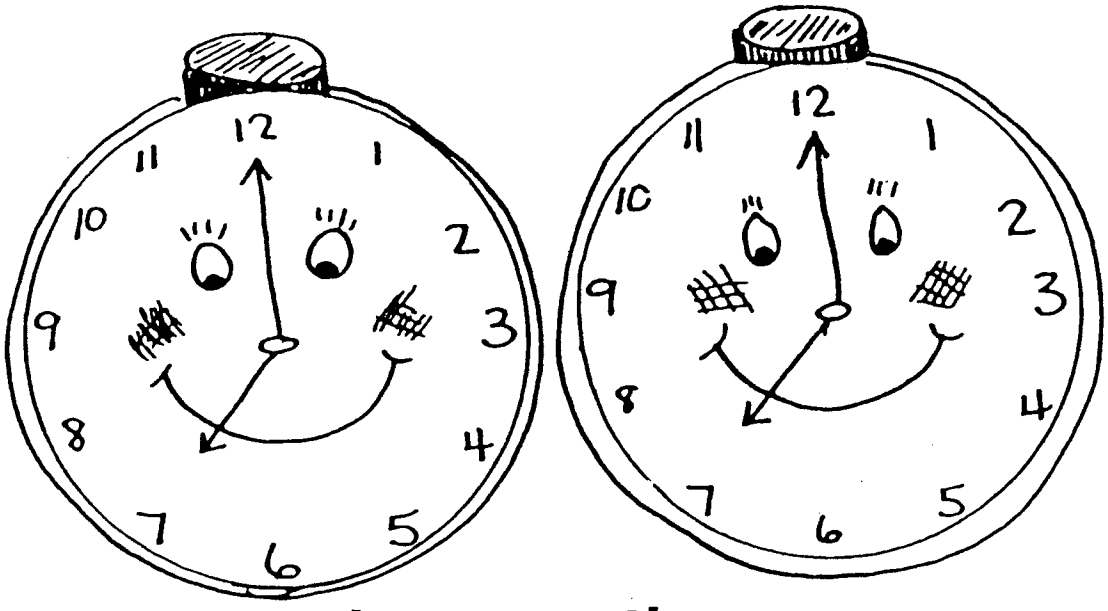


less time

How Much Time?

Record Cards



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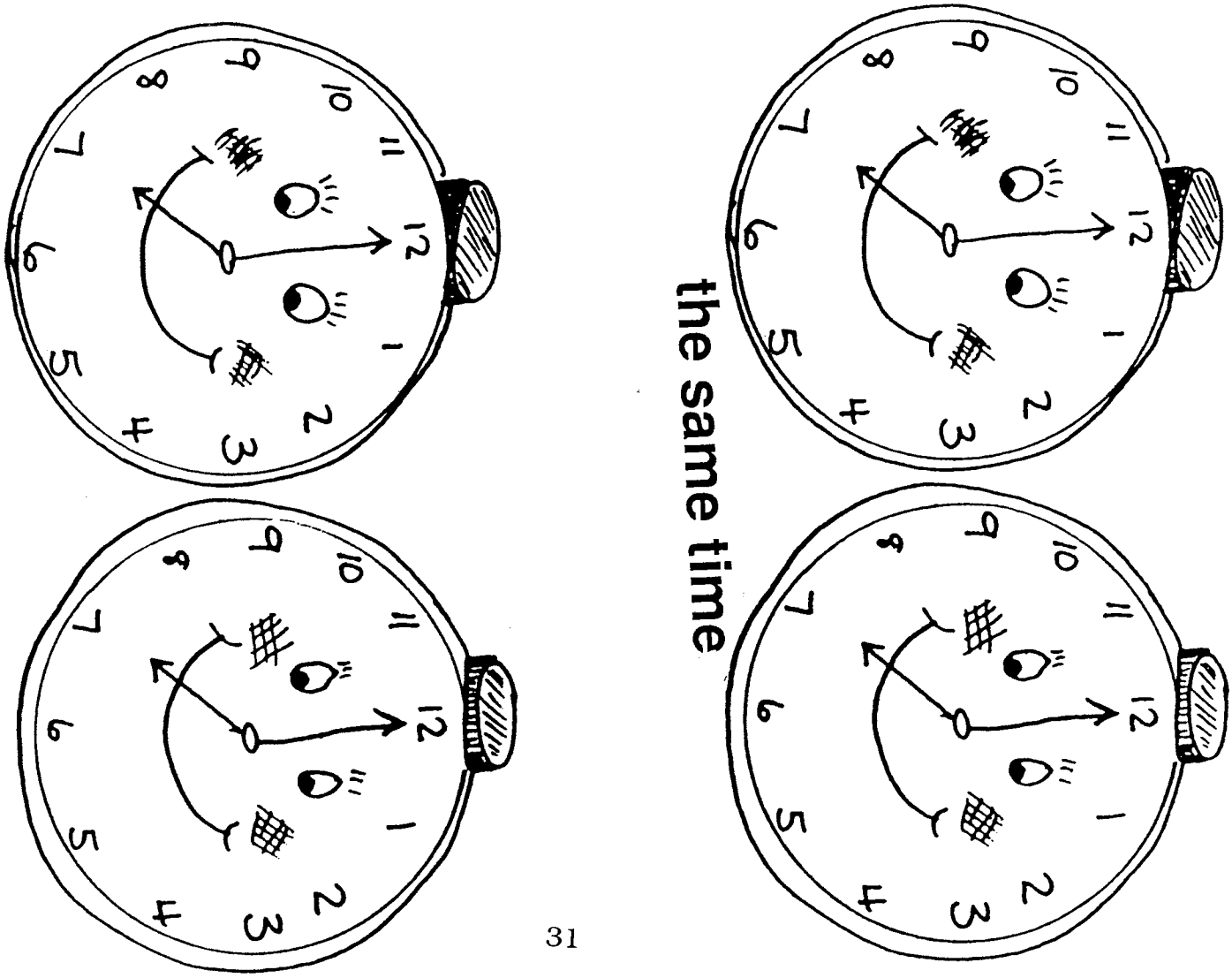
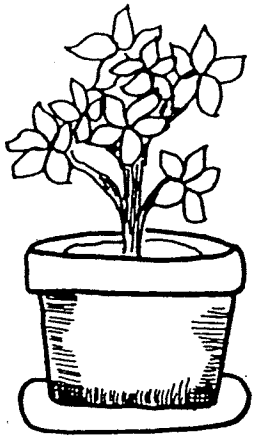


the same time

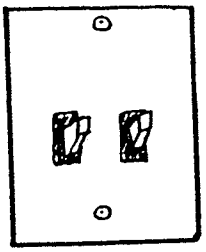
the same time

How Many?

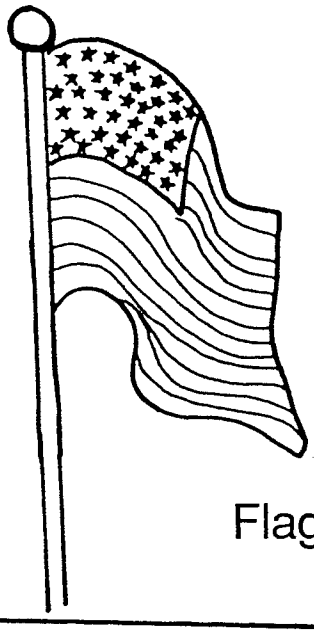
Task Cards



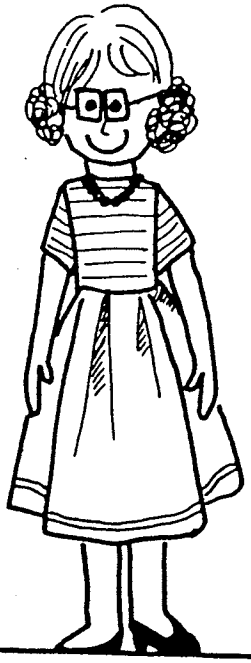
Plants



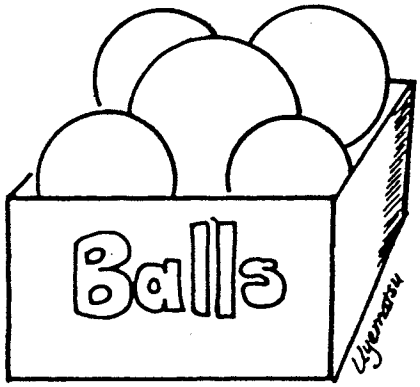
Light switches



Flags



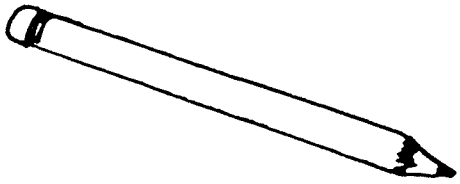
Adults



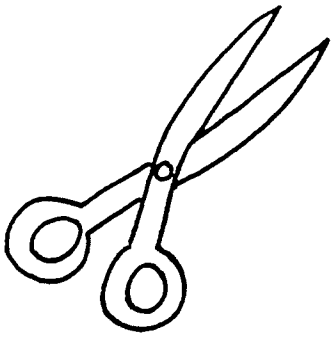
Balls

Jump ropes

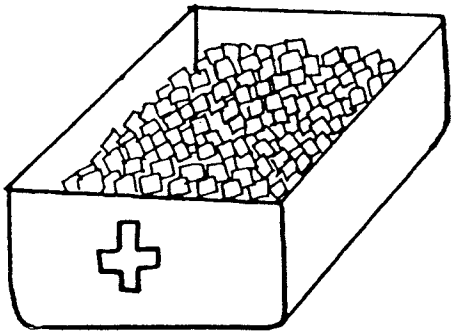
How Many?
Task Cards



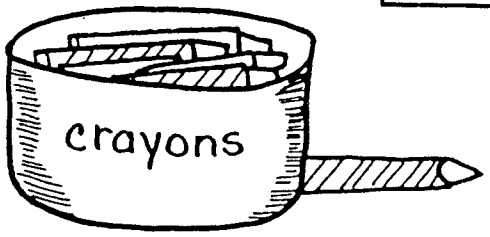
Pencils



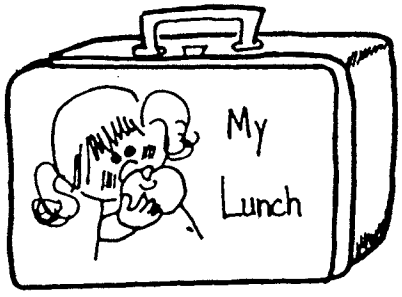
Scissors



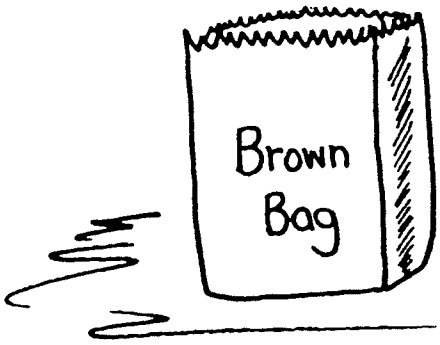
Math tubs



Crayon containers

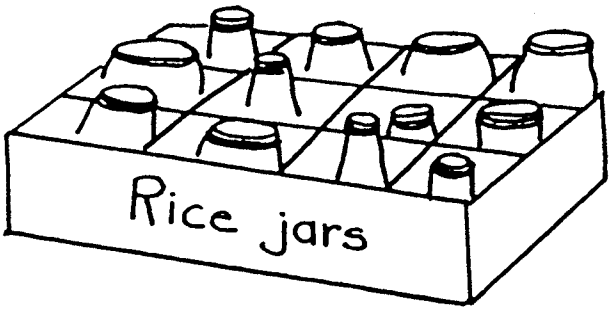


Lunch boxes

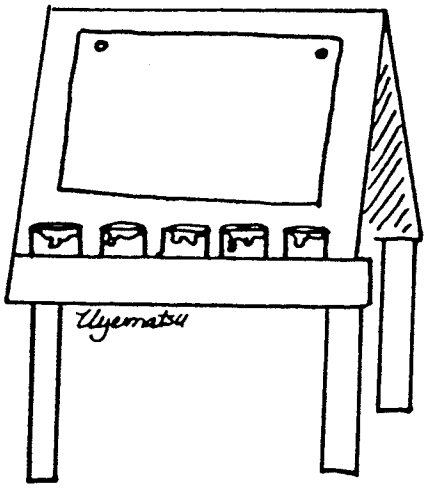


Bags

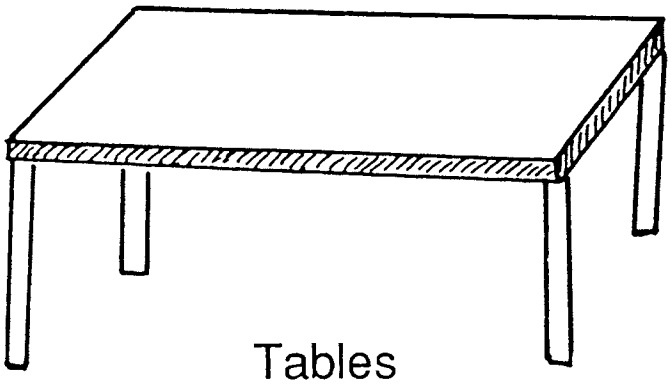
How Many?
Task Cards



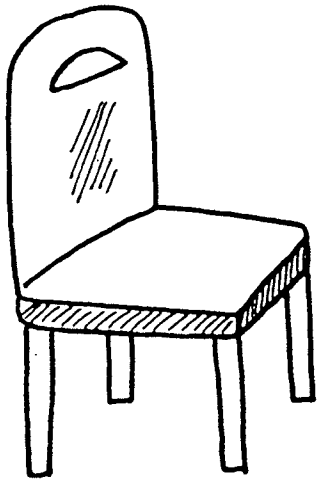
Rice jars (in divided box)



Paint containers

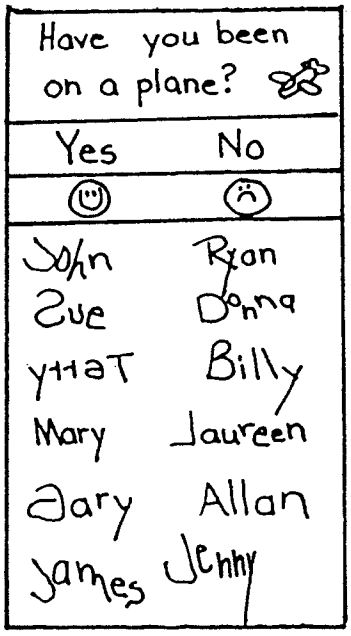


Tables



Chairs

Waste baskets



Graphs

Apply the appropriate labels on both ends of each box lid. Either run the labels on full-sheet Avery Labels No. 5165, cut apart and attach; or simply cut apart these pages and glue or tape on.

Which String?

A PRACTICE & ENRICHMENT BOX

Sticks in a Bag

A PRACTICE & ENRICHMENT BOX

Cubes in a Bag

A PRACTICE & ENRICHMENT BOX

Secret Eggs

A PRACTICE & ENRICHMENT BOX

Weighing Cards

A PRACTICE & ENRICHMENT BOX

Which is Heaviest

A PRACTICE & ENRICHMENT BOX

Weights in a Bag

A PRACTICE & ENRICHMENT BOX

Fill and Mark

A PRACTICE & ENRICHMENT BOX

The Measuring Jar

A PRACTICE & ENRICHMENT BOX

Cups to Fill

A PRACTICE & ENRICHMENT BOX

How Much Time?

A PRACTICE & ENRICHMENT BOX

Sinkers

A PRACTICE & ENRICHMENT BOX

How Many?

A PRACTICE & ENRICHMENT BOX

Which String?

A PRACTICE & ENRICHMENT BOX

Sticks in a Bag

A PRACTICE & ENRICHMENT BOX

Cubes in a Bag

A PRACTICE & ENRICHMENT BOX

Secret Eggs

A PRACTICE & ENRICHMENT BOX

Weighing Cards

A PRACTICE & ENRICHMENT BOX

Which is Heaviest

A PRACTICE & ENRICHMENT BOX

Weights in a Bag

A PRACTICE & ENRICHMENT BOX

Fill and Mark

A PRACTICE & ENRICHMENT BOX

The Measuring Jar

A PRACTICE & ENRICHMENT BOX

Cups to Fill

A PRACTICE & ENRICHMENT BOX

How Much Time?

A PRACTICE & ENRICHMENT BOX

Sinkers

A PRACTICE & ENRICHMENT BOX

How Many?

A PRACTICE & ENRICHMENT BOX

Egg Carton Graphs

A PRACTICE & ENRICHMENT BOX

Ziplocks & Graphs

A PRACTICE & ENRICHMENT BOX

Egg Carton Graphs

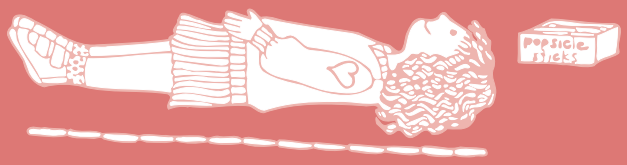
A PRACTICE & ENRICHMENT BOX

Ziplocks & Graphs

A PRACTICE & ENRICHMENT BOX

understanding

Measuring



BOX IT OR BAG IT MATHEMATICS

Practice & Enrichment Boxes

Donna Burk • Allyn Snider
Paula Symonds

Published by The Math Learning Center

Box It or Bag It Mathematics, Practice & Enrichment Box:
Understanding Measuring

Box It or Bag It Mathematics consists of:
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- Teachers Resource Guide and Blackline Masters, 1st and 2nd Grade
- Practice & Enrichment Boxes:
  - Shapes
  - Introduction to Measuring
  - Understanding Measuring
  - Reading, Writing & Understanding Numerals 0–10
  - Pattern
  - Arithmetic
  - Money
  - Place Value Counting
  - Place Value Addition & Subtraction

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Understanding Measuring

Perimeter

Circumferences

Area

Duration

Getting Started

Once you've introduced Measuring through a variety of group lessons (be sure to see Box It or Bag It Mathematics First and Second Grade Teachers Resource Guide, *UNDERSTANDING MEASURING), you will want children to practice and extend their understanding using the activities in this packet. Here are a few things we've found helpful to remember for a successful Independent Practice Time.*

Provide no more than 8-12 boxed activities at one time for a class of 30. Too many activities create more than tolerable chaos. Each Box is designed to be used by 1-4 children. The Measuring Boxes require many general math materials. We box the booklets, record sheets, string wrapped on popsicle sticks, etc., and set those boxes into larger boxes, baskets, or tubs with the needed support materials to make the daily setup easy.

Model each activity thoroughly until children can tell you what to do, step by step. You'll find "box ingredients" and "playing instructions" for each activity in this packet. We use clear contact paper to attach them inside our box lids so WE can remember what goes in each box and how each game is played. Reading the directions would be too difficult for most primary children.

Resist the temptation to put out all your challenging activities at once—provide an equal balance of easy and hard. (If you set out too many difficult Boxes, all the children will need you at once and the noise level will be almost unbearable as your children try to cope with the stress of too many difficult tasks.)

Take time to plan where each task should be placed in your room (tiles on a rug for less noise; rice and jars in an area that's safe, but easy to clean up, etc.).

As you construct these Practice and Enrichment Boxes, cover your box tops with the same design contact paper. That way, you'll be able to pull your Measuring Boxes off the shelf easily, even if they've gotten mixed in with other boxes. (Boxes can be ordered from The Math Learning Center in three sizes: standard (9 X 12 X 2), half size (9 X 6 X 1-7/8) and junk (4 X 7 X 1-1/8.) See the Box It or Bag It Mathematics Teachers Resource Guide, *MATERIALS INDEX, for additional ordering and making information.*

Remember, the Boxes themselves can be used for group instruction. They are ideal for use by an aide or parent with small groups. Some of them can be easily adapted for use with your whole group.

During Independent Practice Time, it's critical that you be available and in circulation to make sure things go smoothly. Once routines even out, you'll have ample opportunity to observe individual students at work. You can spot children with problems or understandings beyond your predictions. See the next page for some observation guidelines.

Be sure to see the Box It or Bag It Mathematics Teachers Resource Guide, *INTRODUCTION, for more implementation strategies.*

UNDERSTANDING MEASURING OBSERVATION CHART

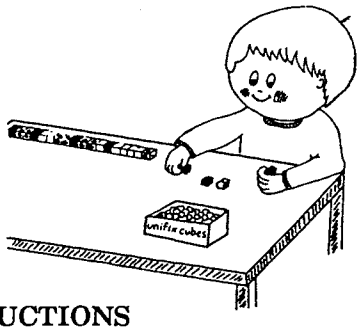
															Children's Names
															Child is able to share materials and work cooperatively
															Child estimates before actually measuring
															Child is able to measure length with a variety of materials
															Child is able to measure weights with a variety of scales
															Child is able to order counters used for measuring into tens and ones
															Child is able to record data accurately
															Child is able to compare data

Length

See *Box It or Bag It Mathematics First and Second Grade Teachers Resource Guide,* UNDERSTANDING MEASURING, Measuring Length, for group introduction to this Box and the next.

HOW LONG IS IT? MEASURING WITH UNIFIX CUBES (1-4 Children)

Box Ingredients→ record booklets
tub of unifix cubes
half box for storage



PLAYING INSTRUCTIONS

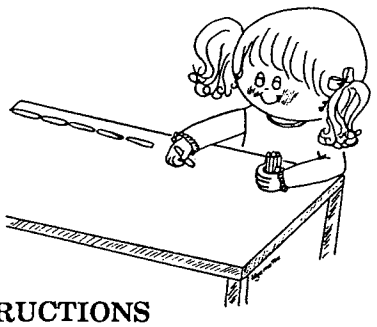
1. Guess how many unifix cubes it will take to measure the first thing in your booklet. Write down your guess.
2. Find the item in your classroom. Measure it with unifix cubes.
3. Break the unifix cubes into tens and ones. Count them. Write the number in your booklet.
4. Do the rest of the pages. Get your work checked.

MAKING INSTRUCTIONS

Record Booklets
Locate record sheets in the blacklines. Select 5-8 items children could measure in your classroom. Run copies of these, along with the cover, and collate into small booklets. Place booklets in a half box. Store the half box in the tub of unifix cubes.

HOW LONG IS IT? MEASURING WITH POPSICLE STICKS (1-4 Children)

Box Ingredients→ record booklets
popsicle sticks
half box for storage



PLAYING INSTRUCTIONS

1. Guess how many popsicle sticks it will take to measure the first thing in your record booklet. Write down your guess.
2. Find the item in your classroom. Measure it with popsicle sticks.
3. Count the popsicle sticks by tens and ones. Write the number in your record booklet.
4. Do the rest of the pages. Get your work checked.

MAKING INSTRUCTIONS

Record Booklets
Locate record sheets in blacklines. Select 5-8 items children could measure in your classroom. Run copies of these, along with the cover, and collate into small booklets. Place booklets in a half box along with popsicle sticks.

HOW LONG IS IT? MEASURING WITH TILES

Box Ingredients→ 10-15 items to measure

record sheets

25-30 1"-square ceramic tiles

half box for storage

PLAYING INSTRUCTIONS

1. Choose something to measure. Write its name on your record sheet. Guess how many tiles long it will be. Write your guess on the record sheet.
2. Measure the object with tiles.
3. Count the tiles by tens and ones. Write the number on your record sheet.
4. Measure two more things. Use your record sheet. Answer the questions at the bottom. Get your work checked.

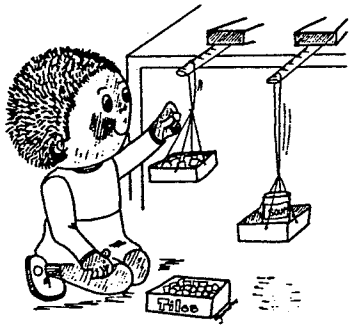
MAKING INSTRUCTIONS

Record Sheets and Things to Measure
Locate record sheet in the blacklines. Run copies and place in a half box, along with some objects to measure (shoelace, drinking straw, playing card, post card, strip of negatives, piece of ribbon, pencil, candle, etc.), and 25-30 tiles.

Weight

See *Box It or Bag It Mathematics First and Second Grade Teachers Resource Guide,* UNDERSTANDING MEASURING, Determining Weight and Weighing Booklets, for group introduction to this Box and the next.

WEIGHING THINGS WITH TILES (1-2 Children)



Box Ingredients→ two milk box scales

two rulers

heavy books or blocks to secure rulers

10-15 objects to weigh, all heavier than a box of crayons

1"-square ceramic tiles

record sheets

half box for storage

PLAYING INSTRUCTIONS

1. Set up milk box scales.
2. Choose something to weigh. Guess how many tiles it will weigh. Write your guess.
3. Put the object in one of the scales. Put tiles in the other scale until both scales are hanging at the same level.
4. Dump the tiles out of the scale. Count them by tens and ones. Write the number on your record sheet.
5. Weigh two more things and record. Answer the questions at the bottom. Get your work checked.

MAKING INSTRUCTIONS

Milk Jug Scales
See Box It or Bag It Mathematics Teachers Resource Guide, MATERIALS INDEX, for making instructions.

Record Sheets
Locate record sheets in blacklines. Run copies and place in a half box. Set out this box, along with a tub of ceramic tiles, a container of things to weigh, and the scales.

Things to Weigh
Here are some ideas: a can of tomato sauce, a can of green chilies (be multi-national!), a candle, an orange, a block, a big old dog bone, a large bolt, a screwdriver, a wrench, a toy truck, a small (1-cup size) box of detergent sealed with filament tape, a bag of metal washers, a lump of clay in a plastic bag, and so on. The list is endless. Scrounge around your kitchen cupboards, your children's rooms, your garage—common, everyday items seem to capture children's interest best.

Label each item with its name on a gummed label. Store items in a tub or box.

THE BALANCE SCALE (1-2 Children)

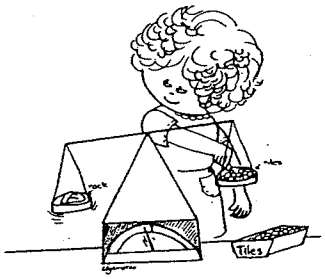
Box Ingredients→ balance scale (you can find them in science kits such as ESS, make them, or order them through curriculum supply houses)

10-15 objects of varying weights (see ideas above)

supply of 1"-square ceramic tiles

record sheets

half box for storage



PLAYING INSTRUCTIONS

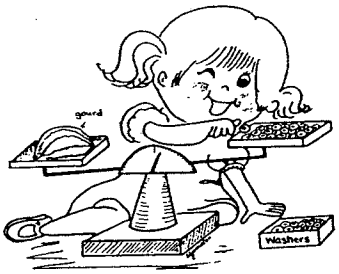
1. Choose something to weigh. Write down its name on your record sheet. Guess how many tiles it will weigh. Write your guess on the record sheet.
2. Put the object on one side of the balance scale. Put tiles on the other side until the scale is balanced.
3. Dump out the tiles. Count them by tens and ones. Write the number on your record sheet.
4. Weigh two more things. Use your record sheet. Answer the questions at the bottom. Get your work checked.

MAKING INSTRUCTIONS

Record Sheets
Locate record sheets in blacklines. Run copies and place in a half box. During Independent Practice Time this box comes out, along with the tub of ceramic tiles, the container of things to weigh, and the scales.

Items to Weigh
Label each item with its name on a gummed label.

THE PAN BALANCE (1-2 Children)



Box Ingredients→ pan balance (many school science kits furnish these; they also can be ordered through curriculum supply houses)

10-15 objects to weigh

80-100 3/16" flat washers (available at any hardware store)

record sheets

half box for storage

PLAYING INSTRUCTIONS

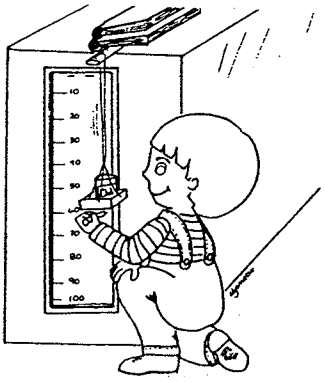
1. Choose something to weigh. Write its name on your record sheet. Guess how many washers it will weigh. Write your guess on the record sheet.
2. Put the object on one side of the pan balance. Put washers on the other side until the scale is balanced.
3. Dump the washers out. Count them by tens and ones. Write the number on your record sheet.
4. Weigh two more things. Use your record sheet. Answer the questions at the bottom. Get your work checked.

MAKING INSTRUCTIONS

Record Sheets
Locate record sheets in blacklines. Run copies and place in a half box along with the washers (in their own small box) and a collection of things to weigh. Label each item to weigh with a gummed label so children can record the item's name on their record sheets.

Things to Weigh
The objects for this activity should be fairly light. Ideas include: small stuffed animals, a bracelet, a mini-box of cereal sealed with filament tape, an eraser, a gourd, a spool of thread, a model car, plastic animal or people models, a spoon, a small ball of yarn, a small candle, a large marble, etc.

CALIBRATED SCALE (1-2 Children)



Box Ingredients→ milk box scale

record pad

ruler

heavy books or blocks to secure ruler

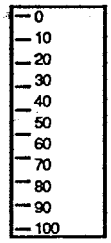
10-15 items of varying weights (see ideas under Weighing Things with Tiles)

10 bags of ten 1"-square ceramic tiles (double-bag each set of ten tiles in sandwich bags; rubber band securely and trim tops)

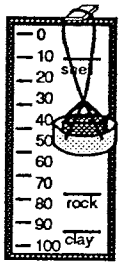
half box for storage

PLAYING INSTRUCTIONS

1. Set up milk box scale by record pad.
2. Put your name on the record pad sheet.
3. Mark a line on the record pad where the bottom of the scale is. Since there are no tiles in the scale, write "0" by that line.
4. Put one bag of ten tiles in the scale. Mark a line on the record pad where the bottom of the scale is. Write a "10" by that mark. Put in another bag of tiles. Mark a line on the record pad where the bottom of the scale comes. Write "20" by that mark. Keep adding one bag at a time and marking where the scale comes each time until you've used all ten bags and the record pad is marked.



5. Take out all the bags of tiles. Now your scale is set to go. Choose something to weigh. Put it in the scale. Mark where the scale comes and write the object's name. Can you tell how many tiles it weighs?

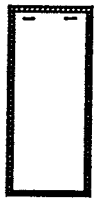


6. Weigh some other things. See if you can find the heaviest and lightest. Tear the sheet off the record pad when you're finished and get it checked.

MAKING INSTRUCTIONS

Milk Box Scale
See Box It or Bag It Mathematics Teachers Resource Guide, MATERIALS INDEX, for making instructions.

Record Pad
Attach 10-15 sheets of 8 X 18 or 8 X 24 newsprint to a sheet of poster board, or 10 X 20 or 10 X 26.



When you set up the Measuring activities in your room, attach the record pad to the side of a bookshelf first. Children set up the books and ruler on top of the bookshelf so the milk box scale hangs down in front of the record pad.

Items to Weigh
Label each item by writing its name on a gummed label. See Weighing Things with Tiles for ideas. Store items in a tub or other sturdy container.

Bags of Tiles
Store bags of tiles in a half box.

Volume

RICE SPOONFULS (1-2 Children)

Box Ingredients→ jars in divided box funnels

5 lbs. of rice (stored in a large cookie tin or other container that can be sealed every night against mice and moths)

brush and dust pan

several spoons, different sizes

record sheets half box for storage

PLAYING INSTRUCTIONS

1. Choose a jar. Write its letter on your record sheet. Guess how many spoonfuls of rice it will take to fill the jar. Write your guess on the record sheet.
2. Set a funnel on the jar. Fill your jar with rice, using the spoon. Make sure each spoonful is level. Write on your record sheet how many spoonfuls it took to fill the jar.
3. Fill two more jars. Use your record sheet. Answer the questions at the bottom. Get your work checked.

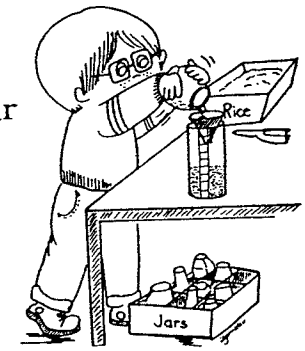
MAKING INSTRUCTIONS

Record Sheets
Locate record sheets in blacklines. Make copies and place in a half box, along with the spoons.

Jars
Label each jar with a letter. Store in a divided box.

Funnels
Cut the tops from large plastic pop bottles with scissors, leaving about 4-5 inches. These are great funnels!

CALIBRATED JAR (1-2 Children)



Box Ingredients→

straight-sided jar, such as a 10-oz. pickle jar or large peanut butter jar

a measuring scoop that will fill the jar exactly (or as close as possible) in ten scoops

jars in divided box

rice set-up

brush and dust pan

record sheet

pencils

funnels

masking tape

half box for storage

PLAYING INSTRUCTIONS

1. Put a strip of masking tape up the side of the straight-sided jar.
2. Fill the special measuring scoop with rice. Pour it into the jar. Mark with a pencil on the tape where the rice is. Pour another scoop of rice into the jar. Mark on the tape where the rice is now. Keep pouring scoopfuls of rice into the jar, marking the tape each time, until the jar is full. You should have ten marks. Pour out the rice. Your jar is calibrated now and ready to use.
3. Choose a regular jar and fill it with rice.
4. Guess how far it will fill your calibrated jar.
5. Color the "guess" jar on the record sheet to show how high you think it will come.
6. Using a funnel between jars, pour the jar of rice into your calibrated jar.
7. Color the "check" jar on the record sheet to show what really happened.

MAKING INSTRUCTIONS

Record Sheets
Locate record sheets in blacklines. Run copies, cut apart, and store them in a half box along with the measuring scoop.

Perimeter

PERIMETERS (1-4 Children)

Box Ingredients→ record booklet

tub of wooden cubes, 3/4", 1", 2", or whatever you have

half box for storage

PLAYING INSTRUCTIONS

1. Guess how many wooden cubes it will take to go around the first thing in your booklet. Write down your guess.
2. Find the thing in your classroom. Put wooden cubes around it.
3. Count the cubes by tens and ones. Write the number in your booklet.
4. Do the rest of the pages. Get your work checked.

MAKING INSTRUCTIONS

Record Booklets
Locate record sheets in blacklines. Select 3-6 items children could measure in your classroom. Run copies of these, along with the cover, and collate into small booklets. Place booklets in a half box. Store the half box in the tub of wooden cubes.

Circumference

HOW BIG AROUND? (1-4 Children)

Box Ingredients→ record booklets

masking tape

string wrapped around tongue depressors

tub of unifix cubes

half box for storage

PLAYING INSTRUCTIONS

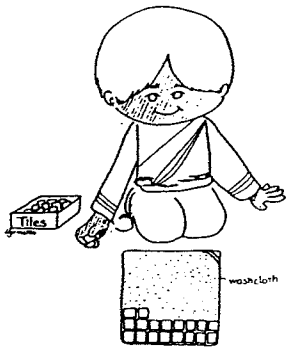
1. Choose an item to measure.
2. Use your string to measure around it exactly. Cut the string. Use little pieces of masking tape to anchor it to the floor.
3. Guess how many unifix cubes long it is. Write your guess on your record sheet.
4. Measure your string with unifix cubes.
5. Break the cubes into tens and ones to count them. Write the number.
6. Do the rest of your pages. Get your work checked.

MAKING INSTRUCTIONS

Locate record sheets in blacklines. Select 5-8 items children could measure in your classroom. Run copies of these, along with the cover, and collate into small booklets. Place booklets in a half box, along with string on tongue depressors. Store the half box in the tub of unifix cubes.

Area

HOW BIG IS IT? SMALL AREAS

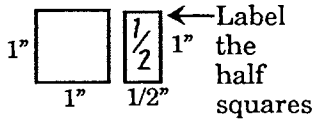


Box Ingredients→ 10-15 square or rectangular items to measure, all small enough to fit into a half box

record sheets

half box for storage

ziplock of 1" and 1/2" posterboard squares, laminated (60 whole squares and 20 half squares are enough)



PLAYING INSTRUCTIONS

1. Pick something to measure. Write its name on the record sheet. Guess how many measuring squares it will take to cover the object. Write your guess on the record sheet.
2. Use the whole and half squares to cover one surface of the object.
3. Dump off the squares. Count them by tens and ones. Write down how many squares it took.
4. Measure two more things. Use your record sheet. Get your work checked.

MAKING INSTRUCTIONS

Items to Measure:
You'll probably want to provide flat items of fairly regular shape. Ideas include: a small book, a "mini box" of cereal secured with filament tape, a baseball trading card, a piece of pretty contact paper (backing left on!), a special piece of gift wrap, a small tablet, a playing card, etc.

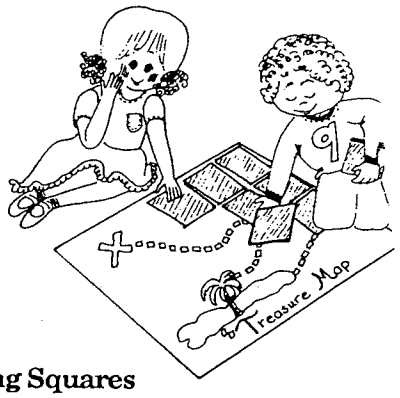
Record Sheets
Locate record sheet in blacklines. Run copies and store them in half box along with items to measure and ziplock of measuring squares. Label each item to be measured by writing its name on a gummed label.

HOW BIG IS IT? LARGE AREAS

Box Ingredients→ record booklets

measuring squares

half box for storage



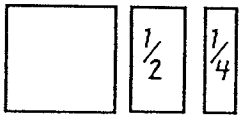
PLAYING INSTRUCTIONS

1. Find the item shown on the first page of your booklet.
2. Guess how many large measuring squares it will take to cover it. Write your guess.
3. Cover it with measuring squares.
4. Count the squares by tens and ones. Write the number in your booklet.
5. Do the rest of the pages. Get your work checked.

MAKING INSTRUCTIONS

Record Booklets
Locate record sheets in blacklines. Select 4-6 items children could measure in your classroom. Run copies of these along with the cover and collate into small booklets. Place booklets in a half box along with the measuring squares.

Measuring Squares
1. Cut sixty 5" squares from one color construction paper.
2. Cut twenty 5 X 2-1/2 pieces of construction paper in a second color and label each "1/2".
3. Cut twelve 5 X 1-1/4 pieces of construction paper in a third color and and label each "1/4".



Duration

SINKERS (1-2 Children)

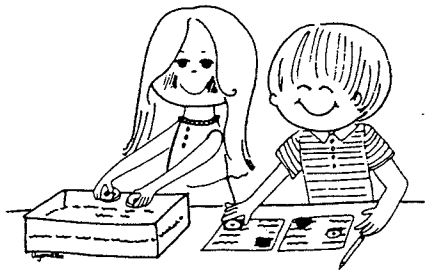
Box Ingredients→ variety of metal lids (15-20) with holes drilled in the center of each

clear container of water

two towels for spills

time records

half box for storage



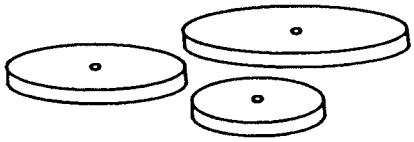
PLAYING INSTRUCTIONS

1. Choose two lids from the collection. Predict which one will sink faster, which one slower.
2. Set the two lids on top of the water and watch to see which one sinks faster. (If your lids don't sink, get them completely wet and start again.)
3. Put the two lids on a time record. Show which one sank faster and which sank slower.
4. Try it again with two different lids.
5. Can you discover anything that's the same about the lids that sink quickly? Share your ideas with someone.

MAKING INSTRUCTIONS

Metal Lids

Use a hammer and a very large nail or a drill to make a hole approximately 1/8" in diameter in each lid.

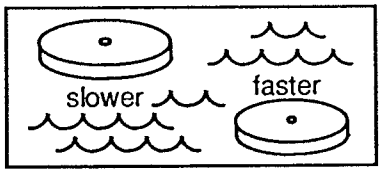


Water

To make lids sink with ease, add liquid dish detergent to your water to break the surface tension.

Time Records

Use a piece of oilcloth or an old shower curtain to create ten 4 X 9 time records. Draw the diagram below on each record with a black permanent marking pen.



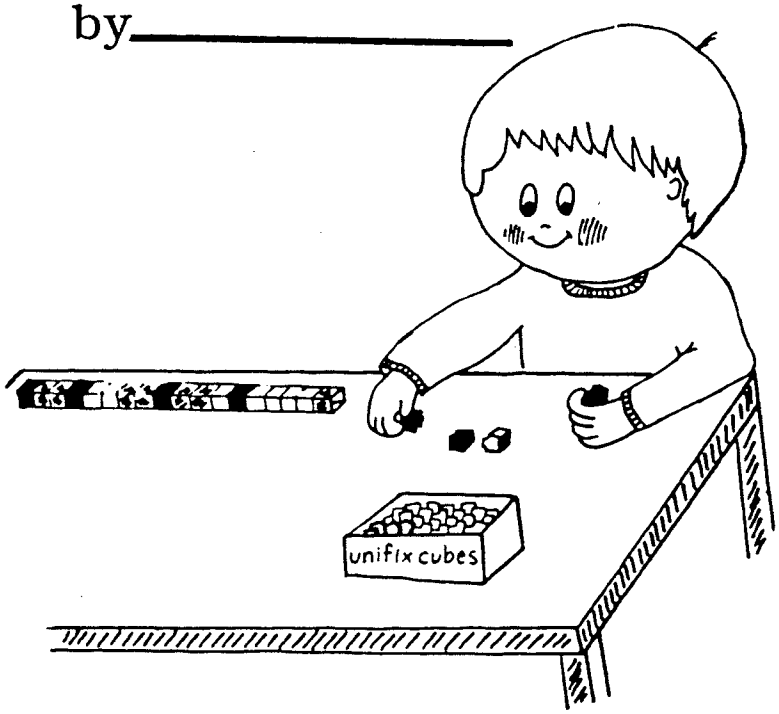
Store time records and lids in a half box. Leave the towels and water container near your sink area.

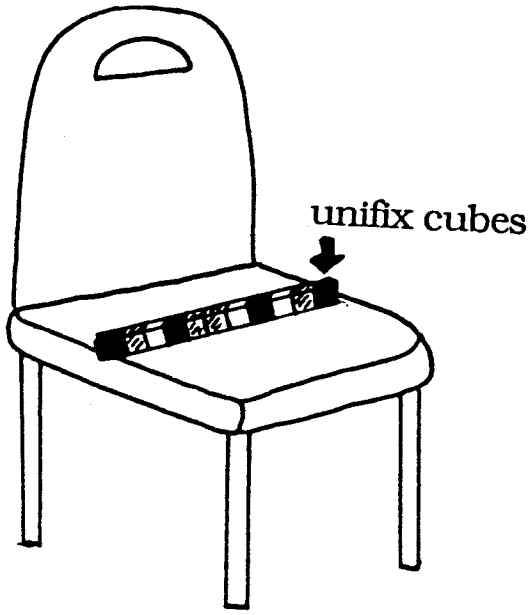
Blacklines

Patterns, cards, spinners, and other materials you'll make for the Practice & Enrichment Boxes described in this packet.

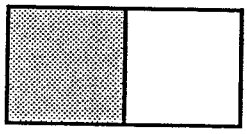
How Long Is It?
(measuring with unifix cubes)

by_____

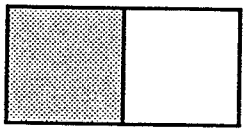




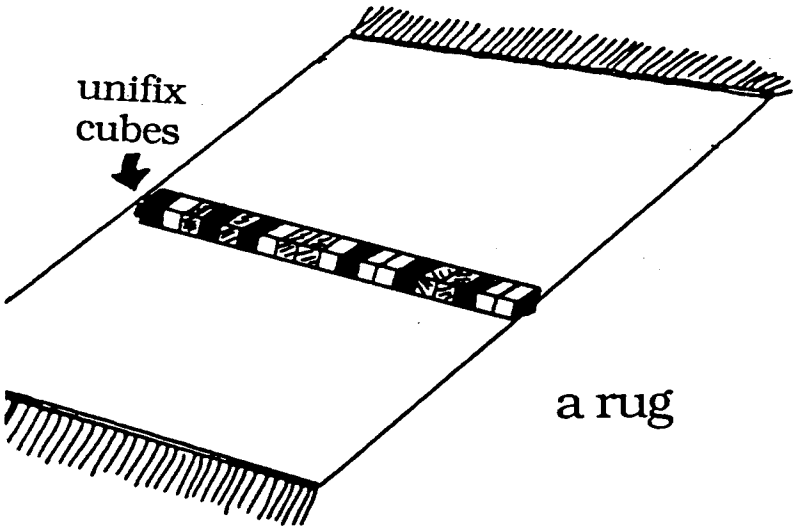
a chair seat



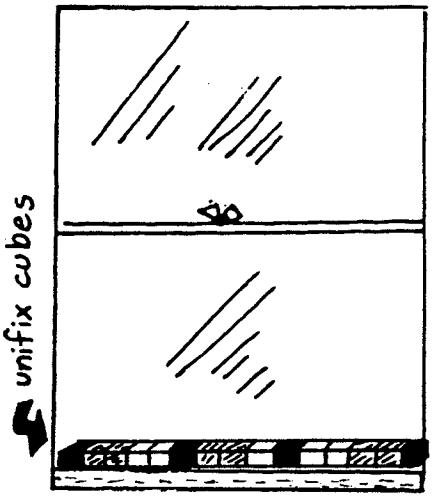
guess



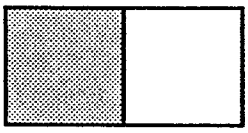
check



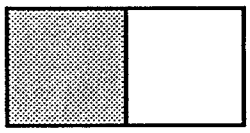
a rug



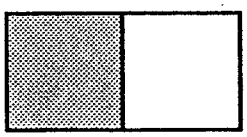
a window (ledge)



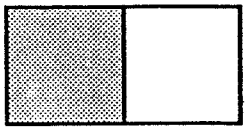
guess



check

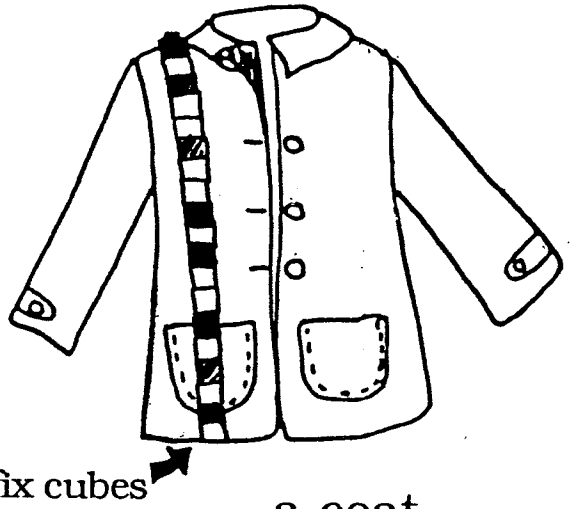


guess



check

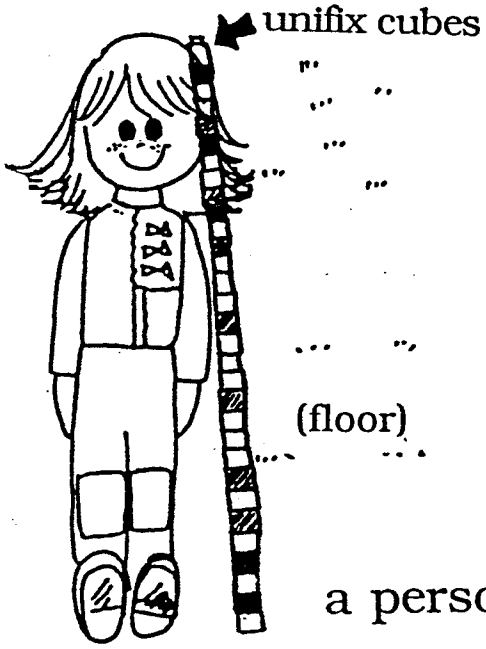
How Long Is It? (measuring with unifix cubes)



a coat

guess

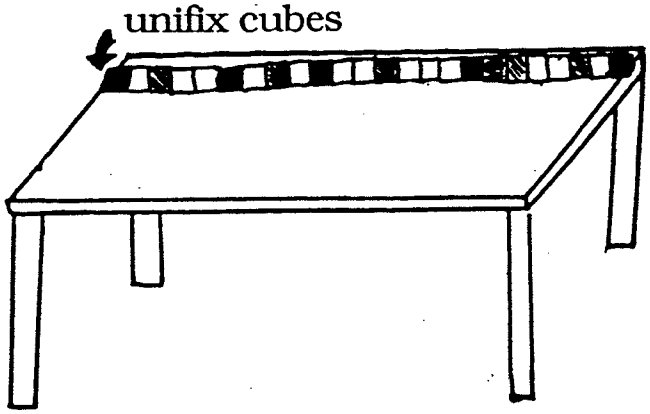
check



a person

guess

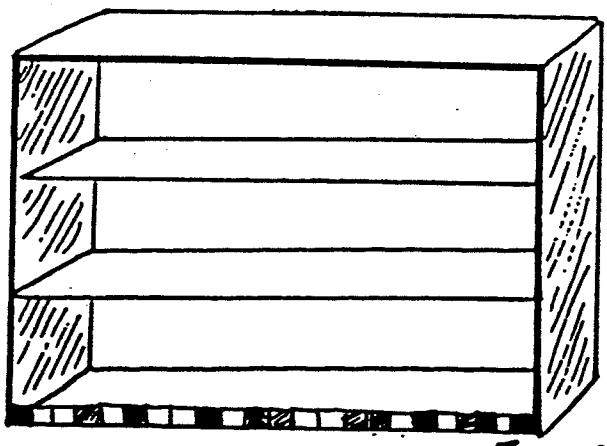
check



a table

guess

check

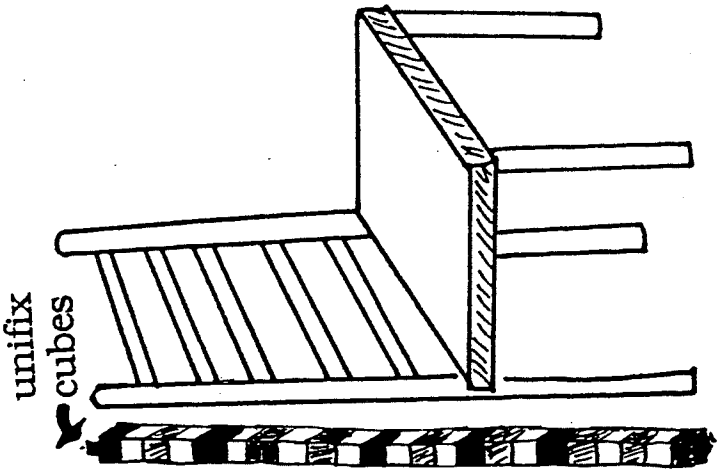


bookshelf

guess

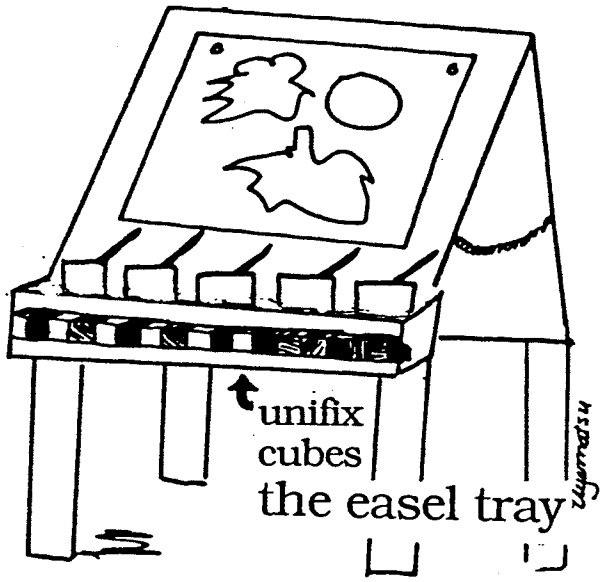
check

How Long Is It? (measuring with unifix cubes)



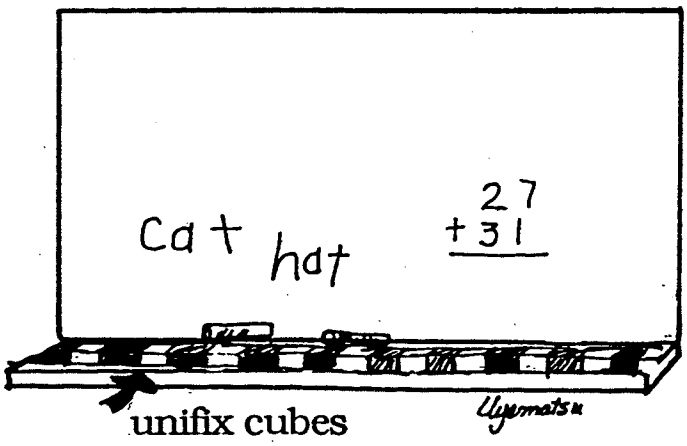
chair on the floor

guess check



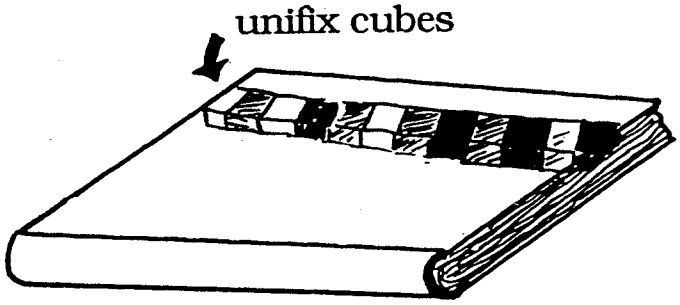
the easel tray

guess check



chalk tray

guess check

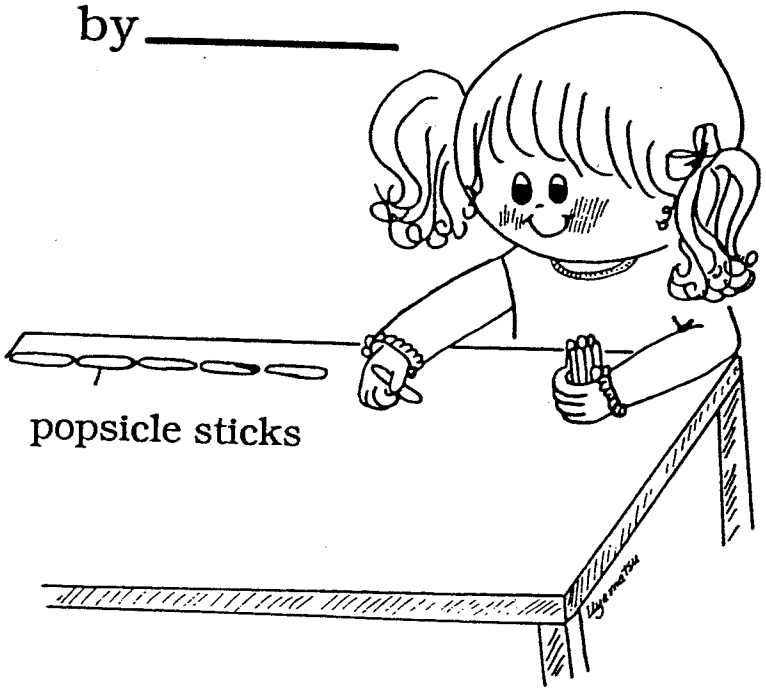


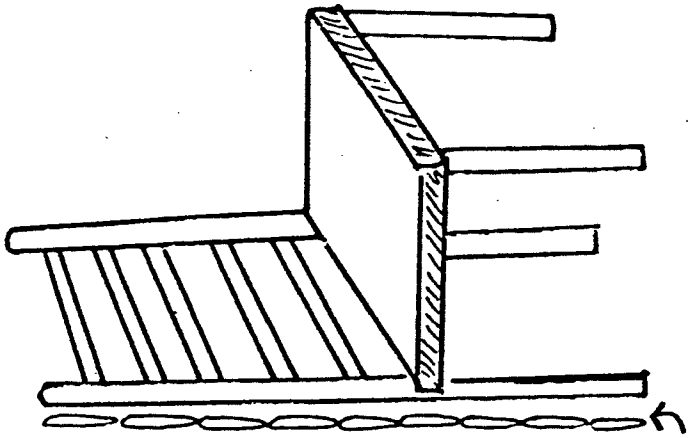
a book

guess check

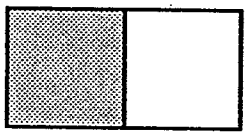
How Long Is It?
(measuring with popsicle sticks)

by _____

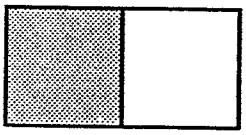




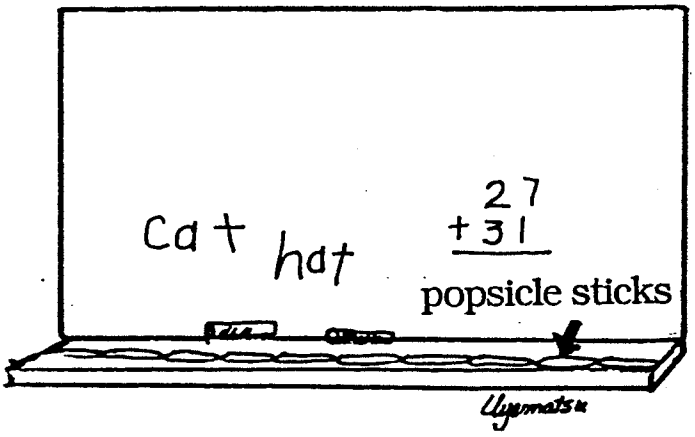
chair on the floor



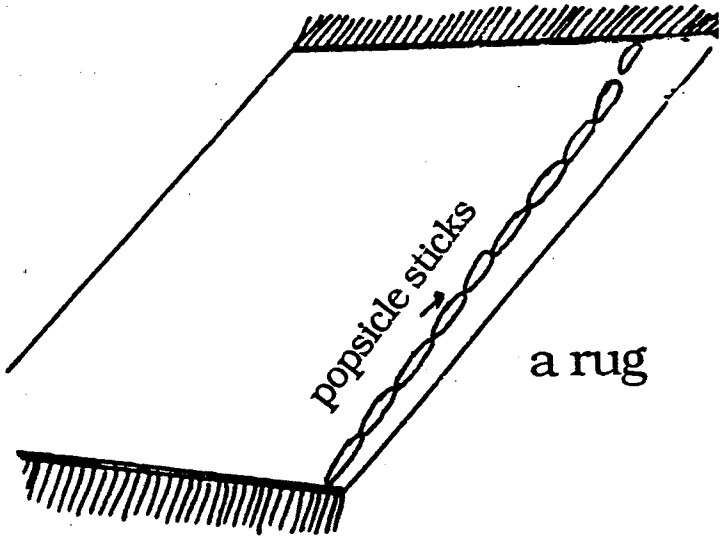
guess



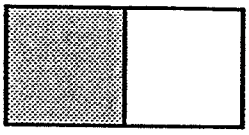
check



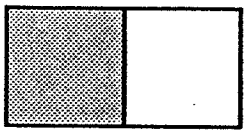
chalk tray



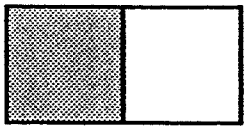
a rug



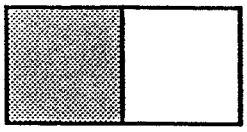
guess



check

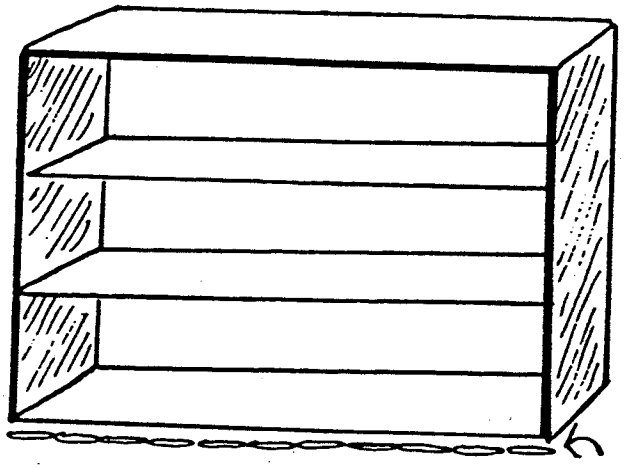


guess



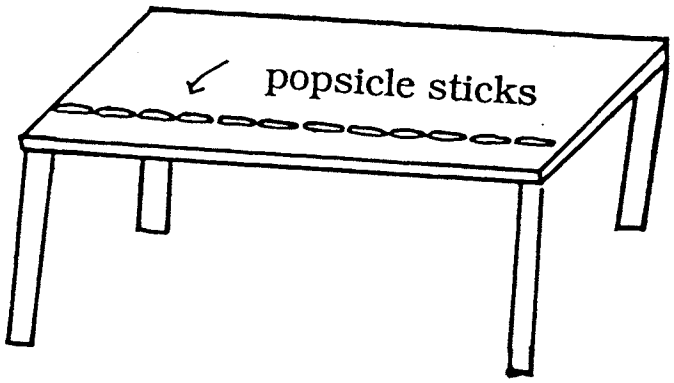
check

How Long Is It? (measuring with popsicle sticks)

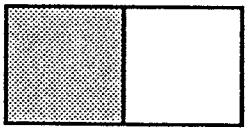


bookshelf

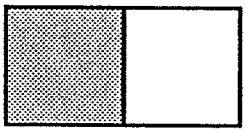
popsicle sticks



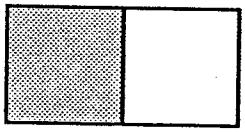
a table



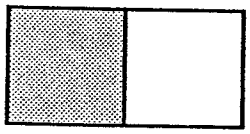
guess



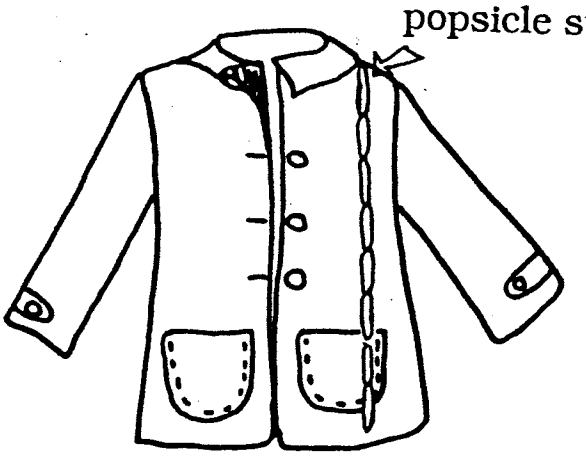
check



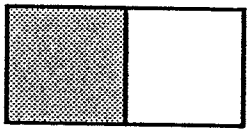
guess



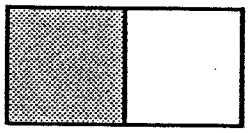
check



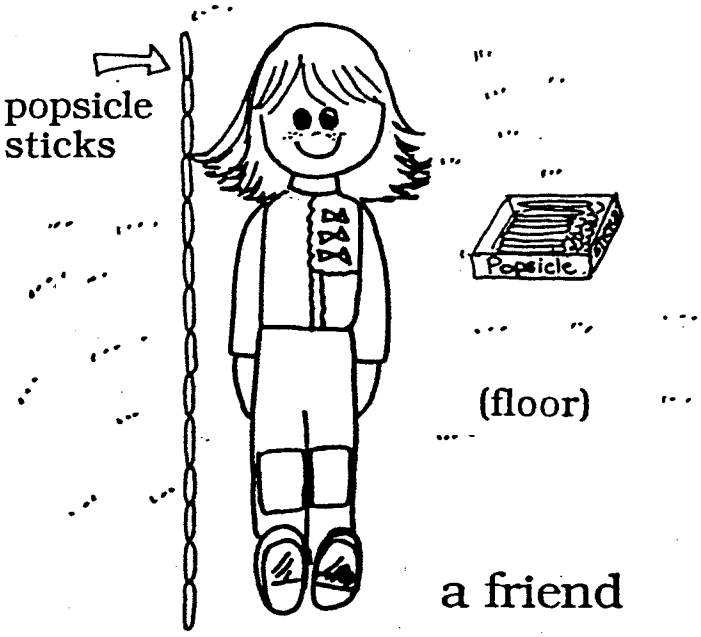
a coat



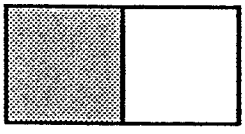
guess



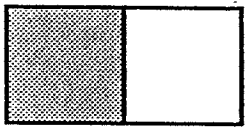
check



a friend



guess



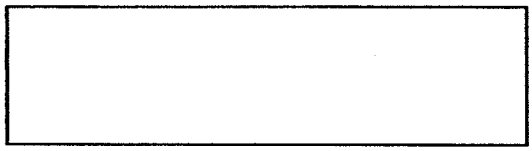
check

How L—O—N—G Is It? Measuring with Tiles

Name _____

guess  's

check  's



guess  's

check  's

guess  's

check  's

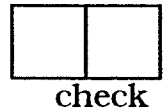
Which is longest? _____

Which is shortest? _____

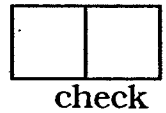
Weighing Things With Tiles

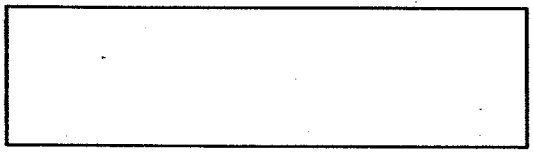
Name _____

guess  's

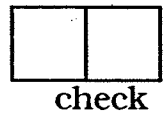
check  's

guess  's

check  's



guess  's

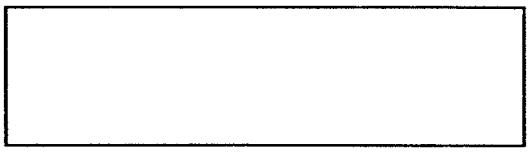
check  's

Which is heaviest? _____

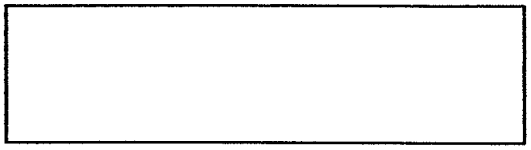
Which is lightest? _____

The Balance Scale

Name _____



guess ◇'s check ◇'s



guess ◇'s check ◇'s

guess ◇'s check ◇'s

Which is heaviest? _____

Which is lightest? _____

The Pan Balance

Name _____

guess ○'s check ○'s

guess ○'s check ○'s

guess ○'s check ○'s

Which is heaviest? _____

Which is lightest? _____

Rice Spoonfuls

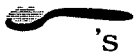
Name _____

Jar ☐

☐☐ guess  's

☐☐ check  's

Jar ☐

☐☐ guess  's

☐☐ check  's

Jar ☐

☐☐ guess  's

☐☐ check  's

Which jar holds the most? _____

Which jar holds the least? _____

How BIG Is It?

Name _____

☐

☐☐ guess ☐ 's

☐☐ check ☐ 's

☐

☐☐ guess ☐ 's

☐☐ check ☐ 's

☐

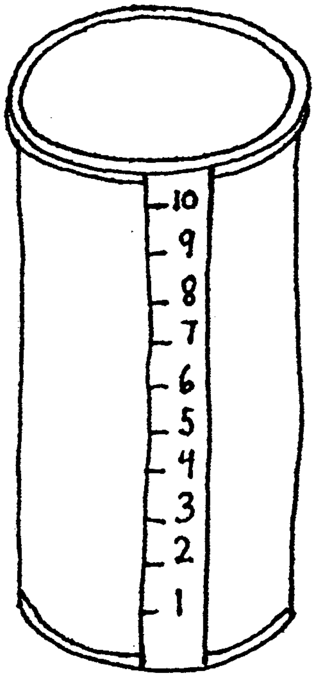
☐☐ guess ☐ 's

☐☐ check ☐ 's

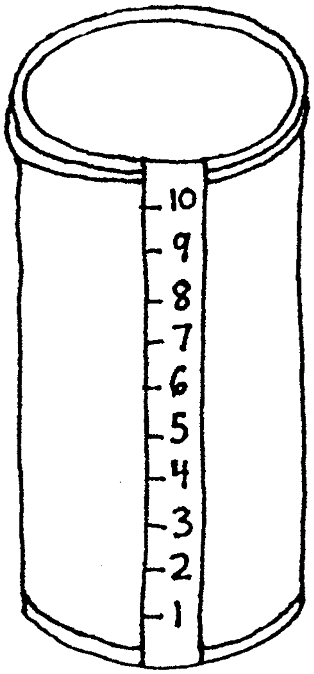
Which is biggest? _____

Which is smallest? _____

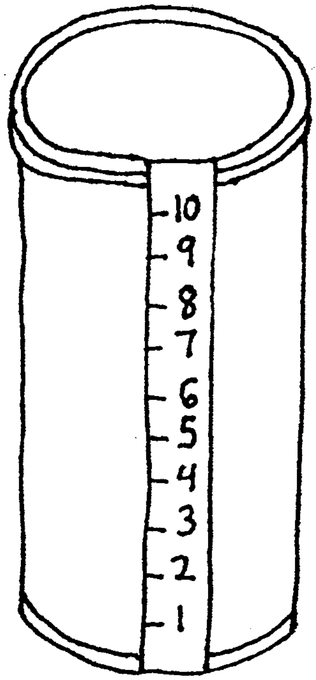
Calibrated Jar



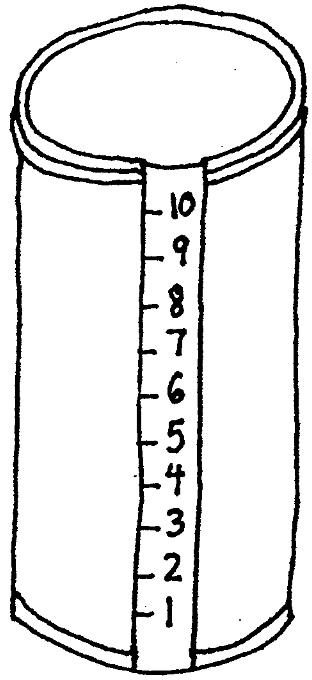
My Guess



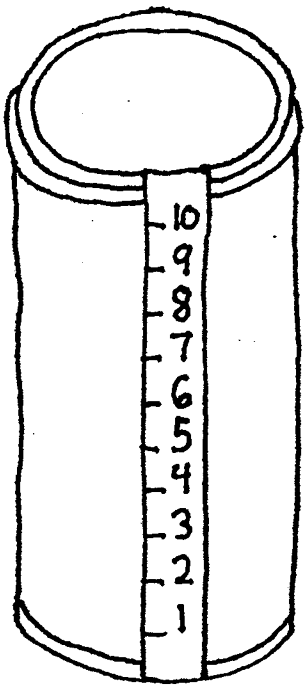
What Really Happened



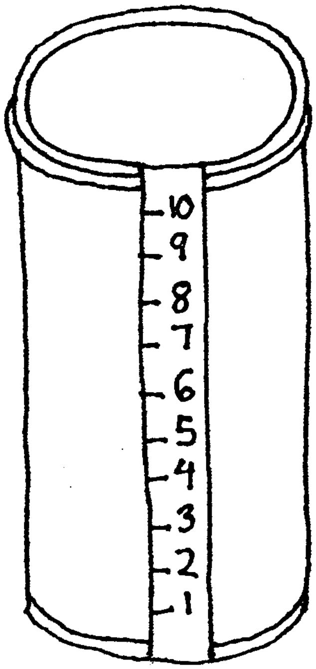
My Guess



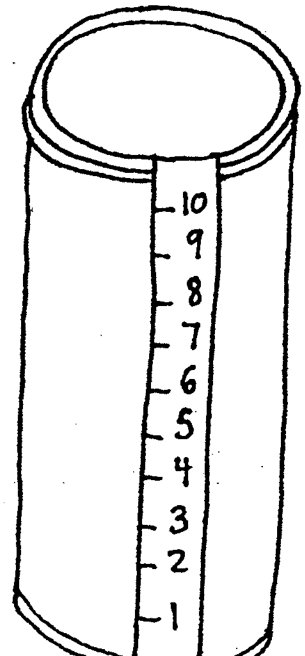
What Really Happened



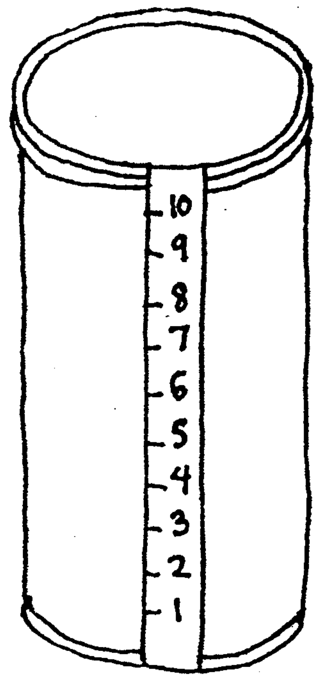
My Guess



What Really Happened



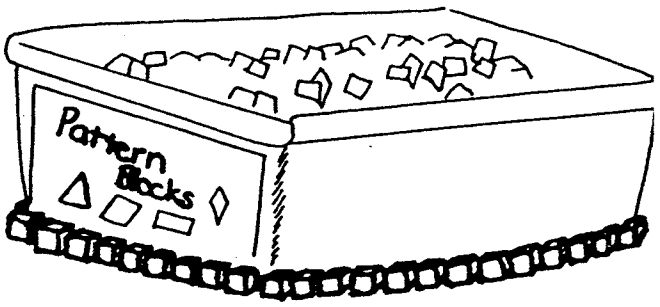
My Guess



What Really Happened

Perimeters

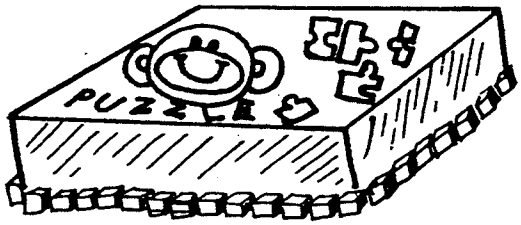
by _____



a math tub

guess

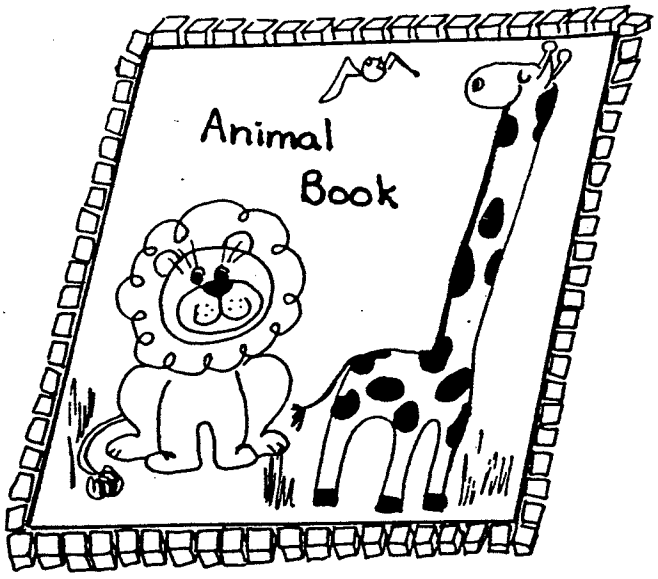
check



a puzzle box

guess

check

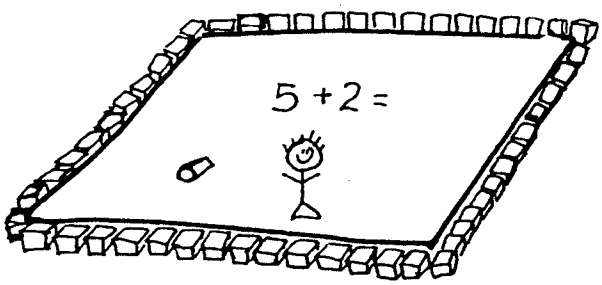


a book

guess

check

Perimeters



a chalkboard

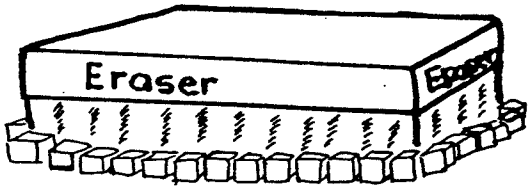
guess

check

a welcome mat

guess

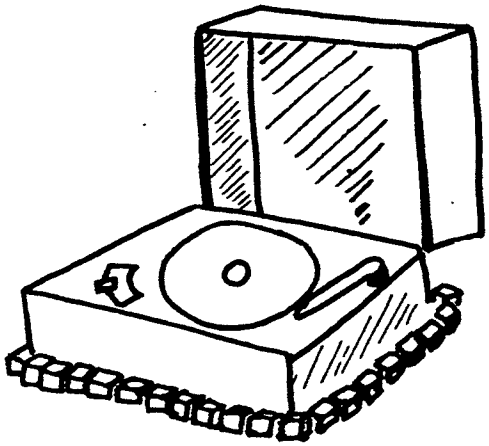
check



an eraser

guess

check



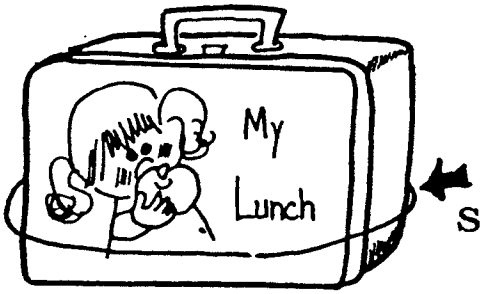
a record player

guess

check

How Big Around?

by _____



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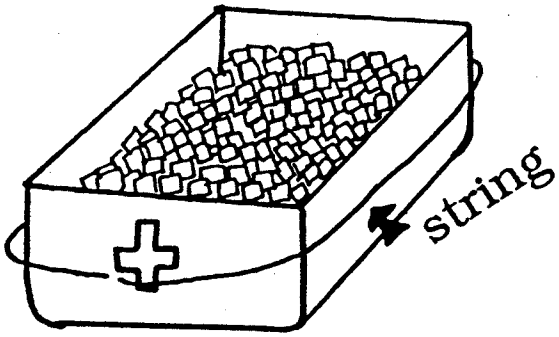

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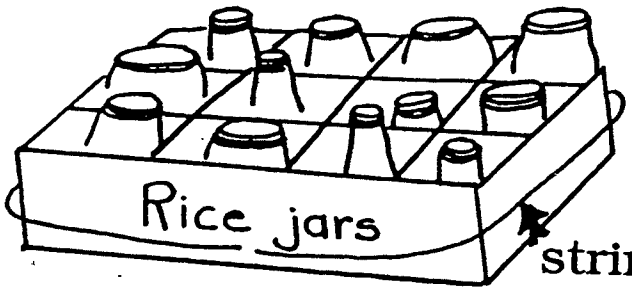

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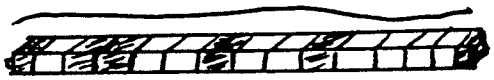
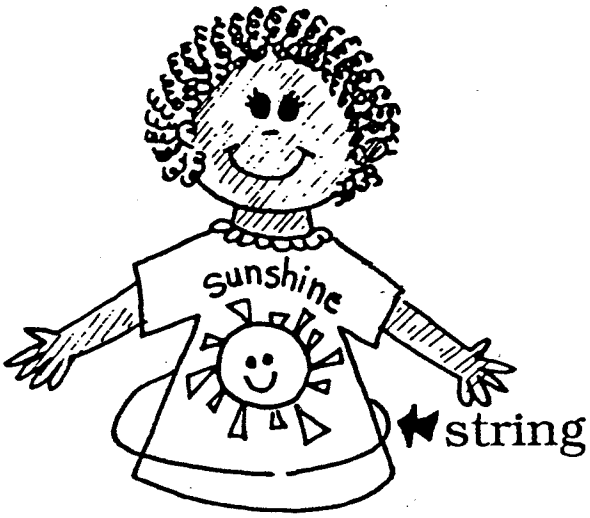
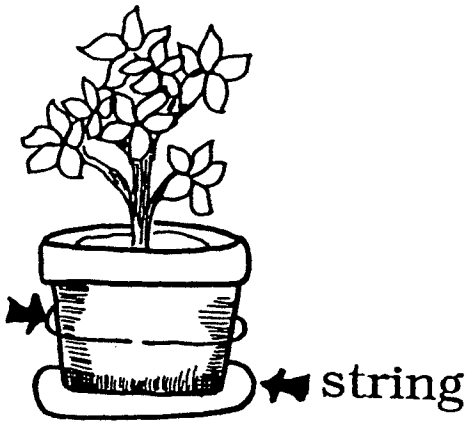


guess check

How Big Around?



guess check



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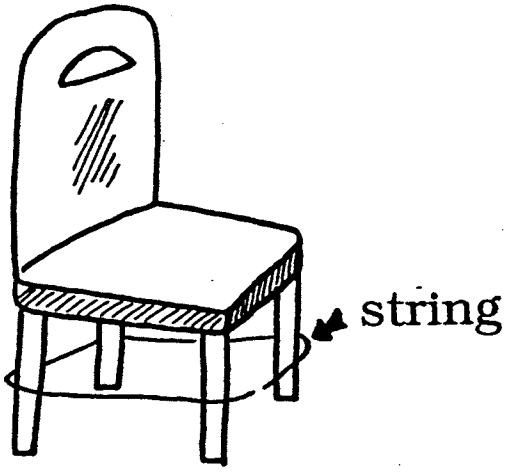

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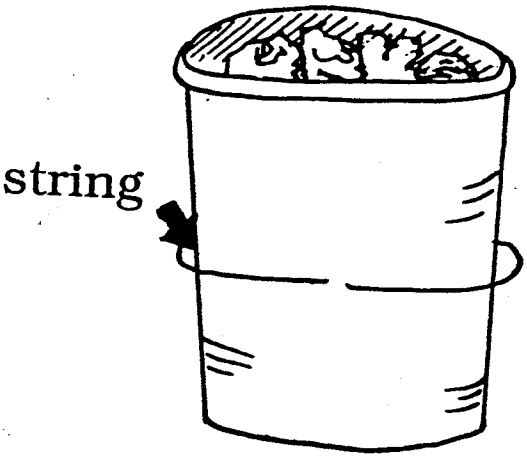
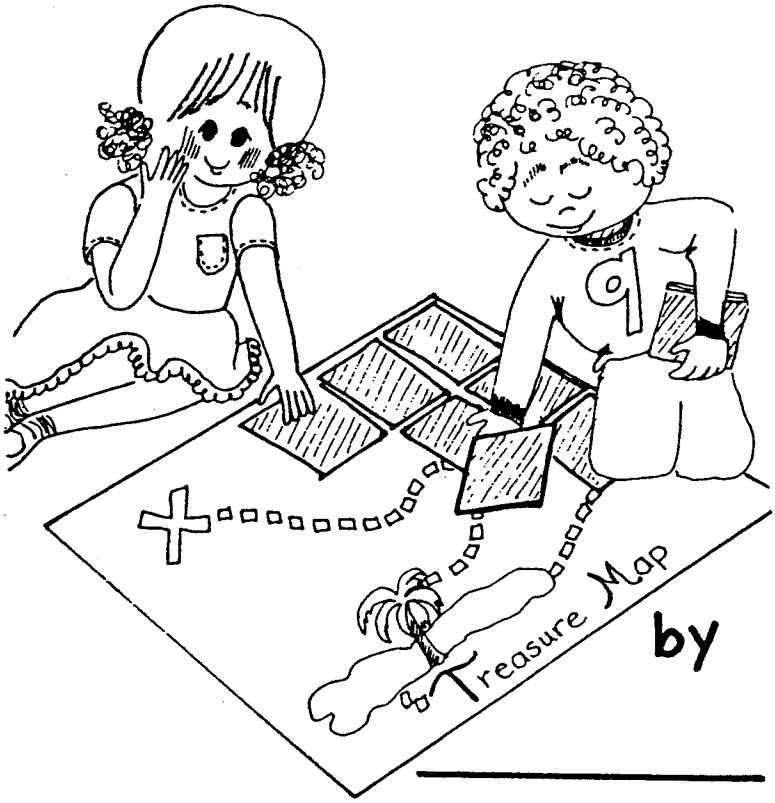
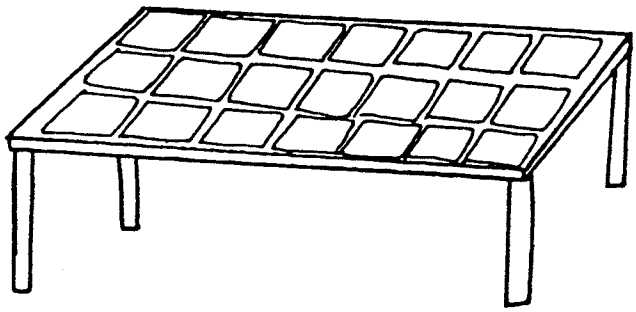


guess check

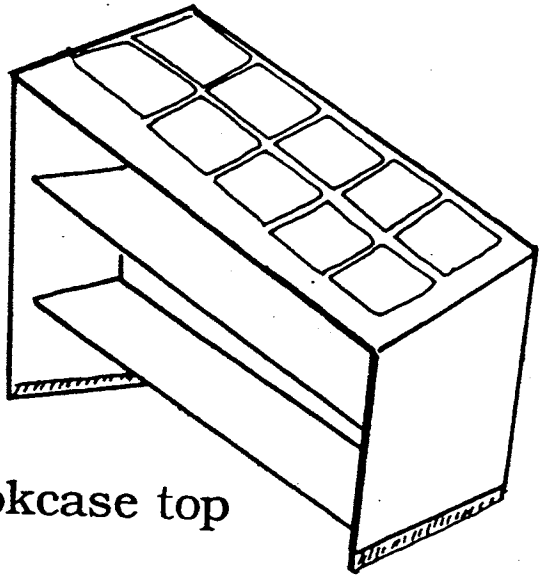
How Big Is It? (large areas)





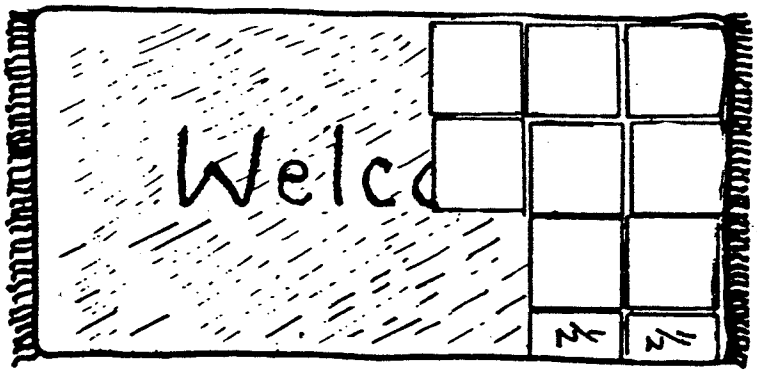
a table top

guess check



a bookcase top

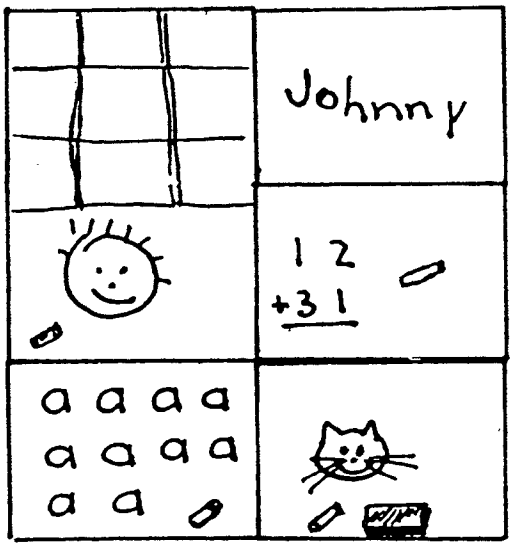
guess check



the door mat

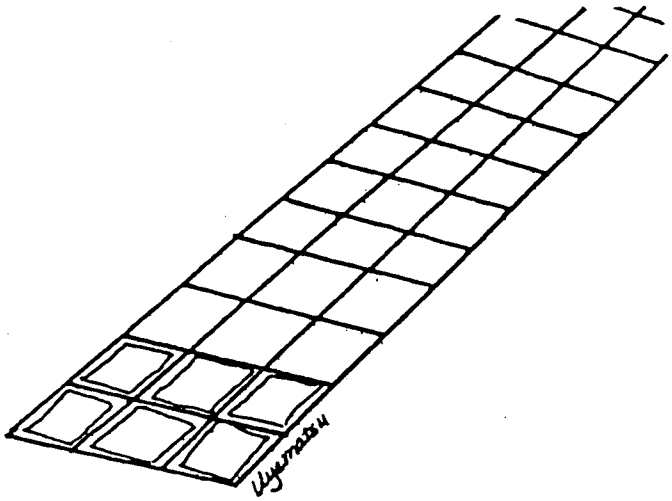
guess check

How Big Is It? (large areas)



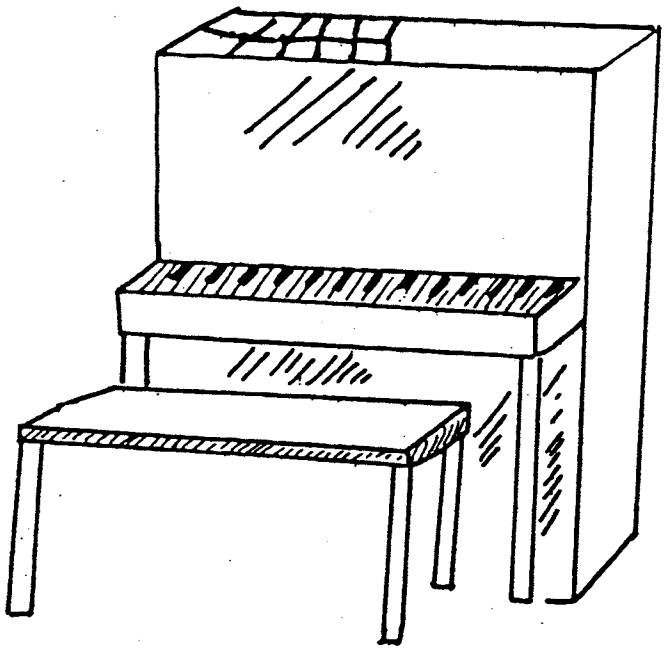
6 student chalkboards

guess check



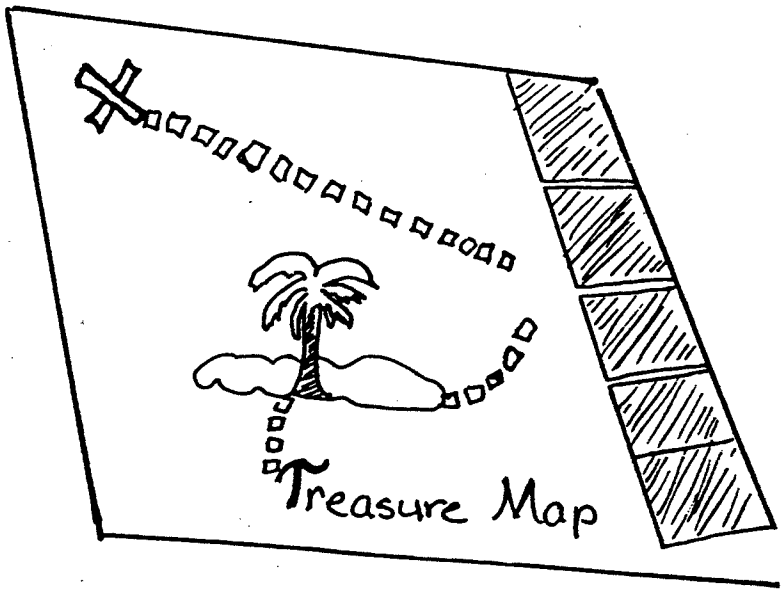
a vinyl graph

guess check



the piano top

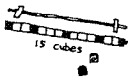
guess check



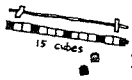
a map

guess check

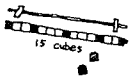
Apply the appropriate labels on both ends of each box lid. Either run the labels on full-sheet Avery Labels No. 5165, cut apart and attach; or simply cut apart these pages and glue or tape on.



How Long is It?
measuring with unifix cubes
A PRACTICE & ENRICHMENT BOX



How Long is It?
measuring with popsicle sticks
A PRACTICE & ENRICHMENT BOX



How Long is It?
measuring with tiles
A PRACTICE & ENRICHMENT BOX

Weighing Things with Tiles
A PRACTICE & ENRICHMENT BOX

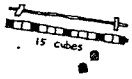
The Balance Scale
A PRACTICE & ENRICHMENT BOX

The Pan Balance
A PRACTICE & ENRICHMENT BOX

Calibrated Scale
A PRACTICE & ENRICHMENT BOX

Rice Spoonfuls
A PRACTICE & ENRICHMENT BOX

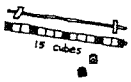
Calibrated Jar
A PRACTICE & ENRICHMENT BOX



Perimeters
A PRACTICE & ENRICHMENT BOX

Circumference
A PRACTICE & ENRICHMENT BOX

How Big Around?
A PRACTICE & ENRICHMENT BOX



Area
A PRACTICE & ENRICHMENT BOX

How Big Is It?
small areas
A PRACTICE & ENRICHMENT BOX

How Long is It?
measuring with unifix cubes
A PRACTICE & ENRICHMENT BOX

How Long is It?
measuring with popsicle sticks
A PRACTICE & ENRICHMENT BOX

How Long is It?
measuring with tiles
A PRACTICE & ENRICHMENT BOX

Weighing Things with Tiles
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The Balance Scale
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The Pan Balance
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Calibrated Scale
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Rice Spoonfuls
A PRACTICE & ENRICHMENT BOX

Calibrated Jar
A PRACTICE & ENRICHMENT BOX

Perimeters
A PRACTICE & ENRICHMENT BOX

Circumference
A PRACTICE & ENRICHMENT BOX

How Big Around?
A PRACTICE & ENRICHMENT BOX

Area
A PRACTICE & ENRICHMENT BOX

How Big Is It?
small areas
A PRACTICE & ENRICHMENT BOX

How Big Is It?
large areas

A PRACTICE & ENRICHMENT BOX

Sinkers

A PRACTICE & ENRICHMENT BOX

How Big Is It?
large areas

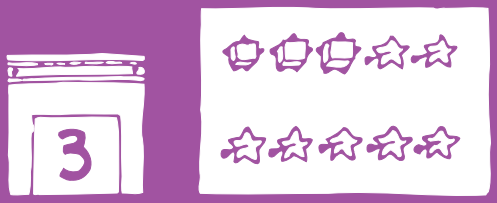
A PRACTICE & ENRICHMENT BOX

Sinkers

A PRACTICE & ENRICHMENT BOX

reading, writing & understanding

Numerals 0-10



BOX IT OR BAG IT MATHEMATICS

Practice & Enrichment Boxes

Donna Burk • Allyn Snider
Paula Symonds

Published by The Math Learning Center

Box It or Bag It Mathematics, Practice & Enrichment Box:
Reading, Writing & Understanding Numerals 0-10

Box It or Bag It Mathematics consists of:
- Teachers Resource Guide and Blackline Masters, Kindergarten
- Teachers Resource Guide and Blackline Masters, 1st and 2nd Grade
- Practice & Enrichment Boxes:
  - Shapes
  - Introduction to Measuring
  - Understanding Measuring
  - Reading, Writing & Understanding Numerals 0–10
  - Pattern
  - Arithmetic
  - Money
  - Place Value Counting
  - Place Value Addition & Subtraction

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Reading, Writing & Understanding Numerals 0–10

Practice & Enrichment Boxes

Getting Started

Once you've introduced Reading, Writing and Understanding Numerals through a variety of group lessons (be sure to see Kindergarten Box It or Bag It Mathematics Teachers Resource Guide, *NUMERALS 0–10, READING, WRITING AND UNDERSTANDING), you will want children to practice and extend their understanding using the activities that follow in this packet. Here are a few things we've found helpful to remember for a successful Independent Practice Time.*

Provide no more than 8–12 boxed activities at one time for a class of 30. Too many activities create more than tolerable chaos. Boxes are designed to be used variously by 1–6 children.

Model each activity thoroughly *until children can tell* you *what to do, step by step. You'll find "box ingredients" and "playing instructions" for each activity in this packet. We use clear contact paper to put them in our box lids so WE can remember what goes in each box and how each game is played. Reading the directions would be too difficult for most primary children.*

Resist the temptation to put out all your challenging Boxes at once—provide an equal balance of easy and hard. (If you set out too many difficult boxes, all the children will need you at once and the noise level will be almost unbearable as your children try to cope with the stress of too many difficult tasks.) Keep in mind that your teaching goals for children this age include working cooperatively together, sharing materials, communication, and increasing large and small motor skills. Many of the Boxes lend themselves to learning that goes beyond the skills commonly associated with beginning numbers.

As you construct these Practice and Enrichment Boxes, cover your box tops with the same design contact paper. That way, you'll be able to pull your Numeral Boxes off the shelf easily, even if they've gotten mixed in with other boxes. (Boxes can be ordered from from The Math Learning Center in three sizes: standard (9" X 12" X 2"), half size (9" X 6" X 1-7/8") and junk (4" X 7" X 1-1/8").)

See the Kindergarten Box It or Bag It Mathematics Teachers Resource Guide, *MATERIALS INDEX, for additional ordering and making information.*

Remember the Boxes themselves can be used for group instruction. They are ideal for use by an aide or parent with small groups. Some of them can be easily adapted for use with your whole group.

During Independent Practice Time, it is critical that you be available and in circulation to make sure things go smoothly. Once routines even out, you'll have opportunities to observe individuals which are not afforded when you conduct group instruction. You can easily spot children with problems or understandings beyond your predictions. See the next page for some observation guidelines.

Be sure to see the Box It or Bag It Mathematics Teachers Resource Guide, *INTRODUCTION, for more implementation strategies.*

Numerals 0-10 Observation and Assessment Sheet

														Children's Names
														Child is able to share materials and work cooperatively
														Child counts by rote to _____
														Child counts with one to one correspondence to _____
														Child recognizes numerals to _____
														Child matches sets and numerals to _____
														Child is able to tally with sticks to _____
														Child is able to respond with counters to story problems.
														Child writes numerals to _____.

Spinner Counting (2–4 Children)

See Kindergarten *Box It or Bag It Mathematics Teachers Resource Guide,* NUMERALS 0–10, for group introduction to this box.

Box ingredients→ two spinners four gameboards

two containers of counters

standard box for storage

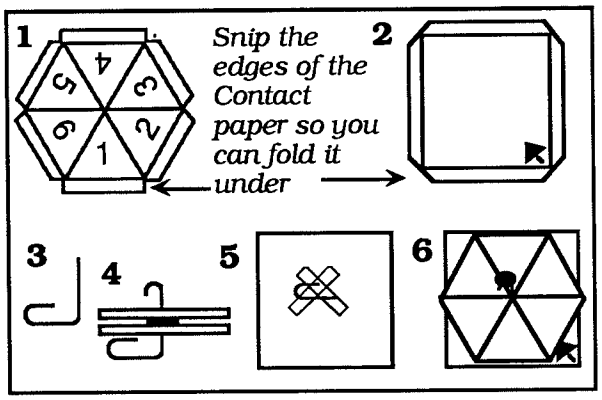
PLAYING INSTRUCTIONS

1. Choose a container of counters.
2. One person begins the game by spinning the spinner. If the arrow points to "5", they set five pieces of junk, one per box, on their gameboard.
3. On subsequent turns, child first counts pieces of junk onto the space below the grid, checks for accuracy, and then moves them up onto the grid.
4. Play continues until one child has completely filled their gameboard.
5. Some children enjoy reversing direction after one board has filled and playing back to 0. It is great for setting foundations for subtraction.

MAKING INSTRUCTIONS

Spinners

1. Locate spinner tops in blacklines. Using waterbase felt markers, color each section a different color to make it stand out and make the spinners more attractive. Use a glue stick to glue tops to poster or matte board. Cut around glued spinner tops and cover the top sides with clear contact paper, overlapping edges to the underside. Use a school compass to poke a hole in the center of each spinner top.
2. Cut a base from poster or matte board that will hold the spinner top and still fit into your game box. Cover with clear contact paper. Set spinner top on the base to determine placement. Mark the center of the top on the base. Poke a hole with your compass in the base. Cut a 1" square washer from poster or matte board. Use your compass to poke a hole in the center.
3. Get #1 paper clips, one for each spinner top. Open a paper clip. Straighten out the shorter side.



4. Assemble base, washer, and spinner top, poking paper clip up through all three.
5. Tape clip on underside of base.
6. Bend opened clip over and tape for safety. Use a permanent pen to draw arrows on base.

Gameboards

Locate gameboards in blacklines. Cover with clear contact paper or laminate. Store in standard box along with counters and spinners.

Spin, Count, and Make A Book (1–4 Children)

Box ingredients→

- spinners
- scissors
- stapler
- standard box for storage
- book pages
- folder for book pages
- colored paper book covers

PLAYING INSTRUCTIONS

1. Choose a record sheet.
2. Spin the spinner until it stops with the arrow pointing to a numeral.
3. Write the numeral the spinner tells you.
4. Mark an "X" on as many items as the spinner tells you.
5. Do this over and over until you have completed your sheet.
6. Cut the sheet apart on the section lines, put on a cover, and staple into a book.

MAKING INSTRUCTIONS

Spinner
Locate the spinner top in blacklines. See Spinner Counting for making instructions.

Book Pages
Locate five blacklines in packet. Make many copies of each.

Folder to Hold Book Pages
Buy three Duo-Tang folders with the pockets on the bottom. Tape them together at tops, bottoms, and on the left edge with filament tape to make a six-page/pocket book. Place a set of papers in each pocket. Save the last pocket for your cut book covers.

Jump and Count (2 Children)

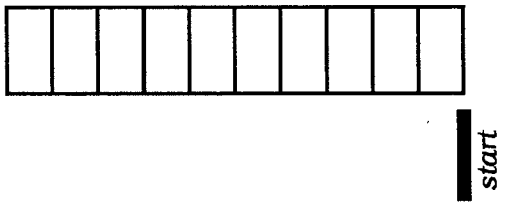
> See Kindergarten *Box It or Bag It Mathematics Teachers Resource Guide*, NUMERALS 0–10, for group introduction to this box.

Box ingredients→

- jumping strip
- masking tape
- Jump and Count more/less spinner
- half box for storage
- record sheets
- scissors

PLAYING INSTRUCTIONS

1. Unroll the jumping strip and anchor it to the floor at both ends with masking tape. It is safest to jump beside the strip rather than on it, so put another piece of masking tape at one end of the strip to be your starting line.



2. Put your toes behind the starting tape and jump. Try not to fall forwards or back-wards.
3. Have your partner count the boxes you jumped. Write your name on the record sheet and how many boxes you jumped.
4. Let your partner have a turn. After you've both jumped and recorded, spin the more/less spinner to determine the winner. Loop the winner's name and number on the record sheet.
5. Repeat this activity several times. Staple your record sheets into booklets to take home.

NOTE: If you are doing this activity at a time of the year when name writing would be too difficult, the children *love* pasting on each time a xerox copy of their own picture. Another alternative is to have their name prewritten on gummed labels. Or just have numeral cards made, two of each number 1-10, eliminate the record sheet, and have the children lay out a card for each jump.

MAKING INSTRUCTIONS

Jumping Strip
Cut a length of butcher paper 40" long by 4" wide. Mark it with lines at 4" intervals to create ten boxes. Laminate or cover with clear contact on both sides for sturdiness. Provide rubber band or loop of elastic for storage after it is rolled up.

More/less Spinner
Locate Jump and Count spinner top in blacklines. See Spinner Counting for making instructions.

Record Sheets
Locate Jump and Count record sheets in blacklines. Make copies, cut apart, and store in a half box, along with the jumping strip and spinner.

Bounce and Count (2 Children)

Box ingredients→ rubber ball
record sheets
Bounce and Count spinner
half box for storage

PLAYING INSTRUCTIONS

1. Bounce the ball as many times as you can without missing. Have your partner help you count the bounces.
2. When you miss, your turn is over. Write your name and the number of bounces on the record sheet.
3. Let your partner have a turn. After you've both bounced and recorded, spin the more/less spinner to determine the winner. Loop the winner's name and number.
4. Repeat several times. Staple your record sheets into booklets to take home.

NOTE: This activity works best when supervised by a parent or aide *outside* your classroom.

MAKING INSTRUCTIONS

Record Sheets
Locate the Bounce and Count record sheet in blacklines. Run, cut apart, and store in a half box with the Bounce and Count spinner.

More/less Spinner
Locate Bounce and Count spinner top in blacklines. See Spinner Counting for making instructions.

Toss and Count (2 Children)

Box ingredients→ Toss and Count more/less spinner
scoop
bean bag
record sheet
half box for storage

PLAYING INSTRUCTIONS

1. Toss the bean bag up and down with the scoop. Have your partner help you count the tosses.
2. When you miss and drop the bag, your turn is over. Write your name and the number of tosses on the record sheet.
3. Let your partner have a turn. After you've both tossed and recorded, spin the more/less spinner to determine the winner. Loop the winner's name and number.
4. Repeat several times. Staple your record sheets into booklets to take home.

NOTE: This activity works best when supervised by a parent or aide *outside* your classroom.

MAKING INSTRUCTIONS

Scoop
Cut bottom away from a bleach bottle with scissors. Use the top portion with the handle for scoop.

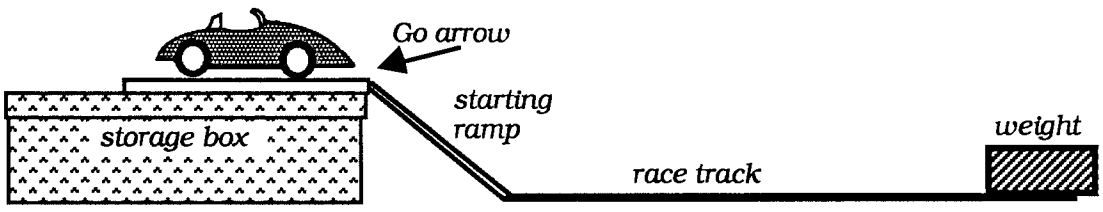
Bean Bag
Find a parent to sew a sturdy fabric bean bag. Stuff with beans.

More/less Spinner
Locate Toss and Count spinner top in blacklines. See Spinner Counting for making instructions.

Record Sheets
Locate Toss and Count record sheet in the blacklines. Run, cut apart, and store in a half box with the Toss and Count spinner and the bean bag.

Grand Prix (2 Children)

Box ingredients→ race track
Grand Prix record sheets
race ramp
more/less spinner
two Hot Wheels cars (heavy ones)
standard box for storage



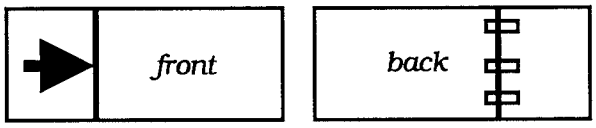
PLAYING INSTRUCTIONS

1. Set up ramp and race track with your partner as pictured below. It's helpful to use building blocks as rails along the sides of the track, too. (See illustration above.)
2. Place your cars on the "start arrow" and give it a slight tap to get it going down the ramp. Count the boxes with your partner to determine how far your car traveled.
3. Write your name and the number of boxes your car traveled on the record sheet.
4. Let your partner have a turn. After you've both run your cars and recorded, spin the more/less spinner. Loop the winner's name and number.
5. Repeat several times. Staple your record sheets into booklets to take home.

MAKING INSTRUCTIONS

Race Track
Cut a length of butcher paper 72" X 11". Draw section lines across it every six inches to serve as the boxes the children will count. Laminate or contact on both sides for strength. (See illustration below.) Provide a rubber band or loop of elastic to be used when race track is rolled for storage box.

Starting Ramp
1. Cut two pieces of matte board, one 4" X 6", and one 6" X 6".
2. Hinge on the backside with short pieces of filament tape.
3. Draw a "go" arrow on the short section.



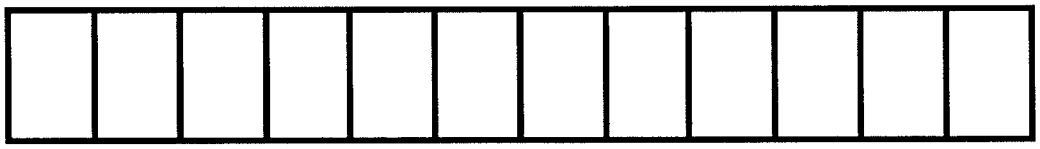
More/less Spinner
Locate Grand Prix spinner top in blacklines. See Spinner Counting for making instruc-tions.

Cars
Find or purchase two or more Hot Wheels or Matchbox cars (the heavy kind go farther).

Record Sheets
Locate Grand Prix record sheets in blacklines. Make copies, cut apart, and store in standard size box, along with cars, race track, race ramp, and more/less spinner.

NOTE: It seems to help the children stay on task better if they each take a few "trial runs" before they begin to write on the record sheets.

race track



Top Draw (2 Children)

Box ingredients→ Top Draw cards junk box for storage

PLAYING INSTRUCTIONS

1. Shuffle or mix up all the cards.
2. Place all cards face down in a pile.
3. Each player draws one card and reads the numeral.
4. Cards are then compared and top value wins.
5. Player holding card that was "more" takes both cards to his/her winning pile.
6. Play continues until all cards are used up.
7. Players count their winnings. The player with the most cards wins.

MAKING INSTRUCTIONS

Top Draw Cards
Locate Top Draw cards in cardstock portion of packet. Laminate playing cards. Cut apart. Store in junk box.

Gift Wrap Counting (1–4 Children)

Box ingredients→ laminated gift wrap cards

Vis-a-Vis or overhead projector pens

record sheets, if desired

standard box for storage

provide slightly dampened cloths or paper towels for cleanup

PLAYING INSTRUCTIONS

1. Choose a counting card.
2. Guess how many items are on the card.
3. Write down your guess.
4. Count the items, marking each item as you count.
5. Write down how many you counted.
6. Clean off your card.
7. Choose another card.
8. If you're using the record sheet, once it has been filled, cut each section apart to make a little book.
9. Staple your book pages together. Don't forget your name.

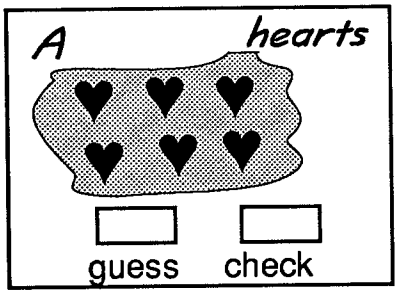
MAKING INSTRUCTIONS

Gift Wrap Cards

1. Gather a variety of gift wraps with countable designs. Remember the children love bringing in these kinds of things.
2. Cut (free form) around the amount of paper you wish to use.
3. Mount it on 8-1/2" X 11" tag. Use a different wrap on each side of your tag so you create two counting jobs per card.
4. Make a guess box and check box on each side of card. (See illustration below.)

Record Sheets

Many teachers ask us for record sheets so they have math papers to send home. This adds still one more step for the children to remember but we do know that as teachers we like to show parents how much we are doing. Suit yourself about their use. If you plan to use the sheets, locate them in the blacklines. Run, cut, and store along with the gift wrap cards and pens in a standard size box.



Children dot or "X" each item with pen as they count

Spin 50 (2 Children)

See Kindergarten *Box It or Bag It Mathematics Teachers Resource Guide*, NUMERALS 0–10, for group introduction to this box.

Box ingredients→ gameboards spinner

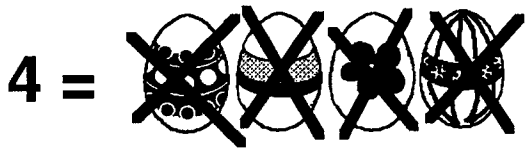
Vis-a-Vis or overhead projector pens

standard box for storage

provide slightly dampened cloths or paper towels for cleanup

PLAYING INSTRUCTIONS

1. Get out pens, gameboards, and spinner.
2. Spin the spinner and mark an "X" on each egg the numeral directs.



3. Take turns spinning and marking.
4. The first player to mark all eggs on his/her gameboard wins.

MAKING INSTRUCTIONS

Gameboards
Locate in cardstock portion of packet. Laminate.

Spinner
Locate in blacklines. Assemble as directed in Spinner Counting. Store in standard size box along with gameboards and pens.

Spinners and Scissors (1–4 Children)

Box ingredients→ two spinners scissors

envelopes (to hold cut numerals)

construction paper numerals

standard box for storage

PLAYING INSTRUCTIONS

1. Spin the spinner. Name the numeral it shows.
2. Find the numeral in the box.
3. Cut around it following the dotted lines.
4. Spin and cut lots more numerals. Tell a friend how many of each you have cut.
5. Put all your numbers in an envelope to take home.

MAKING INSTRUCTIONS

Spinners
Locate the two spinner tops in the blacklines. Assemble as directed in Spinner Counting.

Envelopes
Buy the cheapest available envelopes—you'll need lots. Or, better yet, get a lot from your school office, or have your children bring them from home.

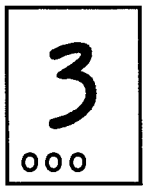
Construction Paper Numerals
Locate blackline in packet. Run many ditto copies on pastel construction paper. Cut apart on paper cutter so the children can pull out one numeral at a time to cut. Store numerals, envelopes, and spinners in standard box.

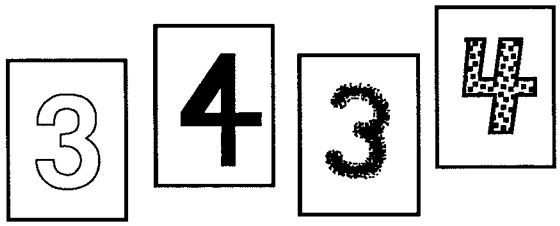
Rub Over Numerals (1–4 Children)

Box ingredients→ peeled crayon pieces rub-over numeral cards
clothespins hole punchers
4-1/2" X 6" pieces of newsprint in tagboard pocket
standard box for storage

PLAYING INSTRUCTIONS

1. Choose a pack of numerals.
2. Take a piece of paper and a clothespin and fasten paper over the numeral card with clothespin.
3. Rub paper with side of peeled crayon over and over until numeral brightly appears.
4. Punch the correct number of holes into your paper.
5. Repeat as many times as you like and staple your completed papers into a little book to take home.





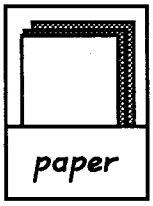
MAKING INSTRUCTIONS

Rub Over Numerals
1. Cut tag into 4-1/2" X 6" cards.
2. Gather pipe cleaners, sand paper, tacky glue, dotted swiss, glitter, yarn, etc. Form numerals using these items. There are patterns in the blacklines to help you cut sand paper numerals. You get a wonderful raised number by using a marking pen to write numerals and then going over it with a line of tacky glue. Let them dry overnight.

If you're feeling rich, you may want to buy a set of numerals sold for needlepoint at your local craft store. They don't need to be mounted on tag.
3. Gather each set of numerals, punch with hole punch on one corner and join with binder ring.

Crayons
Use broken crayons. Peel off paper wrapping.

Paper
Cut newsprint 4-1/2" X 6". Make a tagboard pocket to hold this. Store, along with crayons, numeral cards, paper, clothespins, and hole punchers in standard box.



Counting Books—Commercial (1–4 Children)

Box ingredients→ 7–10 simple counting books

standard box for storage

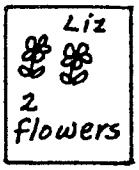
We went through our collection of commercial books and discovered that over the years we had purchased many simple counting books. Before we bring these out as a boxed activity, we read each one. The children love having this box of books available and spend lots of time at this activity.

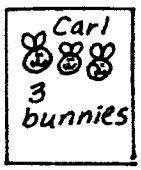
Counting Books—Student Made (1–4 Children)

Box ingredients→ 6–10 student-made counting books

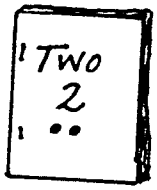
standard box for storage

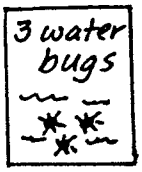
Have children prepare simple counting pictures on 8-1/2" X 11" paper. Write the words they dictate on their sheets.





We like to assemble some books so that every page is about a given number and some books in which there are pages about different numbers. Store these books in a standard box.





Feely Numbers in Order (2 Children)

Box ingredients→ two large Feely boxes numeral cards

two sets wooden, plastic, cardboard, or other hard numerals 1–9, 0–9, or less, depending on your children's needs

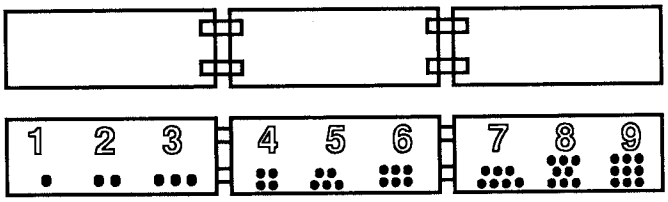
half box for storage

PLAYING INSTRUCTIONS

1. Children put a set of numerals 1–9 into each Feely box.
2. Set out numeral cards.
3. Children work at the same time reaching into their boxes trying to locate numerals in order, that is, the child must first find his/her one, etc., name it and then place it on cards in order.
4. The first child to fill the card wins.

MAKING INSTRUCTIONS

Feely Boxes
For each box:
1. Find a dark colored stretchy sock.
2. Push a cottage cheese carton or plastic refrigerator container into the foot.



Numeral Cards
Hinge three pieces of 8" X 3" tagboard with filament tape on the back side so they'll fold to fit in your boxes.

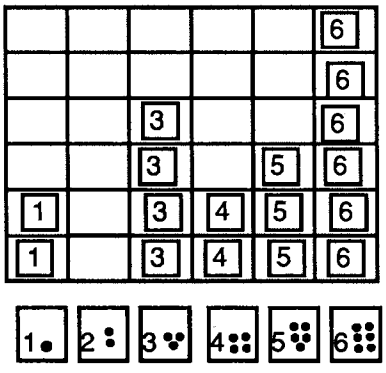
Draw around your numerals on the front side. Be sure to make cards for each player. Store numeral cards in a half box, along with numerals.

Numerals Floor Graph (3–6 Children)

Box ingredients→ vinyl graph
numeral pockets
standard box for storage
large die

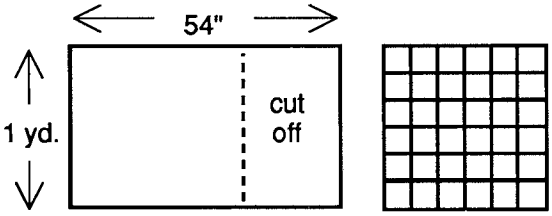
PLAYING INSTRUCTIONS

1. Lay out graph.
2. Each child sits with a packet of numerals at foot of a column.
3. Die is tossed—all children call out number rolled and the child holding that set of numerals puts one on graph.
4. Play continues until one column is filled.



MAKING INSTRUCTIONS

Vinyl Graph
Vinyl is sold in many fabric stores and dime stores for tablecloths. Buy one yard and trim 18" off the wider side to form a 36" square.



Mark your square with a permanent marker in six columns and six rows to create thirty-six 6" squares.

Numerals
Cut 36 pieces of 5" X 5" tag. Make six cards of each numeral 1–6 or 0–5 or 6–11 or 11–16, etc. —whatever your children need—plus a starter card for the foot of each column. Make a tagboard pocket to hold each set. Store pockets of numerals along with vinyl graph in standard size box.

Die
Cut down a large milk carton, tape, spray paint with a glossy paint or cover with plain contact paper. Write dots and numerals on it with a permanent marker. See Box it or Bag It Mathematics Teachers Resource Guide, MATERIALS INDEX, for more detailed making instructions.

Number Race (2–4 Children)

Box ingredients→ gameboard Number Race spinner

markers (4 buttons or unifix cubes of different colors)

standard box for storage

PLAYING INSTRUCTIONS

1. Spin the spinner to see who starts first. (Children decide ahead whether lowest or highest number will win.)
2. Place marker at "GO" arrow.
3. Spin spinner and move your marker the appropriate number of spaces.
4. Take turns and continue playing until someone lands exactly on the winner space.

MAKING INSTRUCTIONS

Number Race Gameboard

1. Color each hexagon on the gameboard with waterbase colored pens.
2. Laminate or cover with clear contact paper.
3. Join edges together by hinging the backsides with filament tape. The gameboard will fold up for storage in your box if you tape it correctly. You may need to experiment a bit.

Spinner

Locate Number Race spinner top in blacklines. See Spinner Counting for making instructions. Store spinner, gameboard, and markers in standard storage box.

Green Beans (1–4 Children)

See Kindergarten *Box It or Bag It Mathematics Teachers Resource Guide*, NUMERALS 0–10, for group introduction to this box.

Box ingredients→ green beans record sheets

standard box for storage

PLAYING INSTRUCTIONS

1. Child counts five or ten (depending upon record sheet used) green beans into his/her hand. The hand is shaken and the beans dumped out.
2. The *green*-sided beans are counted and recorded on the graph by tracing over the numeral, starting at bottom of appropriate column.
3. The task is completed when one column is filled.

NOTE: Many children keep at this until all columns are filled. Others do several pages and make interesting comparisons of which numbers won on each page, etc. However they choose to work, the practice they get is wonder-ful!

MAKING INSTRUCTIONS

Green Beans
Use 1/2 bag of lima beans. Spray paint them on *one* side with bright green spray paint. (The Testor's glossy kind sold in small cans for model airplanes is great!)

Record Sheets
Locate Green Beans record sheets in blacklines. Run one or both sheets. Store, along with beans, in a standard box.

Crazy Crocodile (2–4 Children)

Box ingredients→ Crazy Crocodile cards

You may wish to provide one manila file folder per child to help them shield their cards from view. (They often don't care if someone else sees their cards.)

junk box for storage

PLAYING INSTRUCTIONS

1. Place all cards face down in a pile.
2. Mix them all up.
3. Take turns taking one card each until all the cards have been shared.
4. Look carefully at your cards to see if you have any pairs. Set your pairs in the middle.
5. Now take turns drawing a card from the person beside you going around the circle. Each time you get cards that are pairs, set them in the middle.
6. The last person to have Crazy Crocodile wins (or loses—the children decide!).

MAKING INSTRUCTIONS

Crazy Crocodile Cards
Locate in the cardstock portion of this packet. Laminate and cut apart. Store in a junk box.

Counting Jars (1–4 Children)

Box ingredients→ counting jars, a dozen or more (ziplock bags could also be used)

record sheets

pencils

scissors

standard box for storage

PLAYING INSTRUCTIONS

1. Choose a counting jar.
2. Get a record sheet.
3. Write your jar's letter on your record sheet.
4. Guess how many items are in your jar.
5. Write your guess on your record sheet.
6. Pour out the items in your jar and count them.
7. Write down how many you counted on your record sheet.
8. Do the same thing with another jar.
9. When you have counted three jars, cut your sections apart and staple them into a book. Be sure your name is on it.

MAKING INSTRUCTIONS

Counting Jars
1. Gather at least 12 tiny jars with lids. Your housemates will forgive you for all the olives, capers, sauces, gourmet jellies, etc., you feed them. Don't forget that your class is a great source for such things. Send a note!

2. Fill each jar with 5–40 counters. Here are some possibilities: colored macaroni (use a bit of rubbing alcohol and food coloring to dye), lima beans (even more fun when spray painted a bright, glossy color), shells, plastic cake decorations, cones, keys, plastic fruits, pencil erasers, fruit pits, bones. You have the idea now. Go for it! Check your drawers and closets.

3. Label each jar with an alphabet letter and, if desired, the name of the items inside.

Record Sheets
Locate Counting Jars record sheets in the blacklines. Run, cut, and store along with jars or ziplocks of counting items in a standard size box.

More and Less (2 Children)

Box ingredients→ numeral cards more and less cards

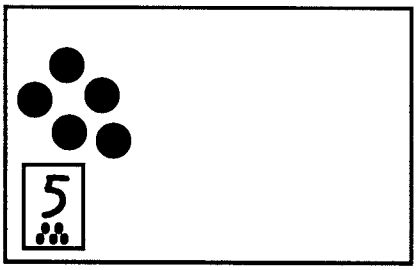
counters

ten working space papers, 6 X 11

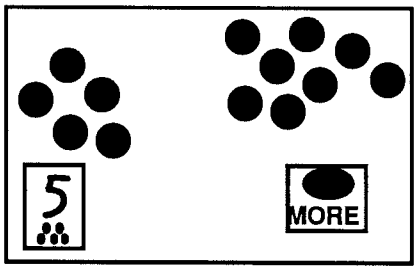
standard box for storage

PLAYING INSTRUCTIONS

1. Lay out numeral cards (face down).
2. Lay out more and less cards (face down).
3. First child draws a numeral card and sets out the appropriate group of counters. Partner checks for accuracy.



4. Partner draws a more or less card and sets out a group of more or less as directed by card.

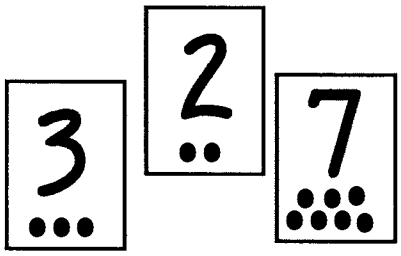


"MORE" group can be any number more than 5.

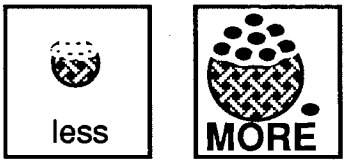
5. Work continues until all cards have been used.
6. When finished, children have an adult check work. (This is really important because of the language children need to understand more and less.) Very mature children sometimes enjoy making little slips that tell how many more or less they have set out. Don't require this, however, for it is still a very difficult skill at first grade.

MAKING INSTRUCTIONS

Numeral Cards
Make a set of cards 1–10. (Or, for less mature children, make cards in duplicate with a lower range of numbers. More sophisticated children enjoy doing this with a set of cards 11–20.) Be sure to include dots on cards for children who aren't yet sure of number names. Make a tag pocket to hold cards.



More and Less Cards
Locate blackline of apple baskets. Cut around each basket and mount on a card. Label "more" or "less".



Make a tag pocket to hold cards and store in a standard box along with numeral cards, counters, and working space papers.

Newspaper Numerals (1–4 Children)

Box ingredients→ spinners (2)

ten different colors of crayons

newspaper ads (It is best to give the children 1/8 or 1/4 sheet to search. Highly motivated children can do several and less mature learners won't be overwhelmed.)

standard box for storage

PLAYING INSTRUCTIONS

1. Choose a newspaper ad.
2. Spin the spinner.
3. Find the crayon that matches the number spun, i.e., red-6, etc.
4. Circle that numeral every time you can find it in the ad using the appropriate crayon.
5. Spin and circle until all the numerals in the ad have been circled.

MAKING INSTRUCTIONS

Spinners
Locate Newspaper Numerals spinner tops in blacklines. Color each numeral a different color, but make sure the two spinners are colored the same. Assemble as in Spinner Counting.

Newspaper Ads
Cut ads (no larger than 1/4 sheet) from newspaper.

Crayons
Include the ten colors you chose for the spinner. It's OK for players to have to share—they need to learn that skill. Store crayons, newspaper ads, and spinners in a standard size box.

Cooky Cutter Numerals (1–4 Children)

Box ingredients→ play dough (recipe follows)

number cookie cutters (available in cooking sections of many stores—the metal ones are the best)

set cards

dowel rolling pins or small commercial rolling pins

standard box for storage

PLAYING INSTRUCTIONS

Easiest Level:
1. Child rolls out play dough and cuts out numerals.
2. Child reads cut numbers to a friend (or friendly adult).

Harder Level:
1. Child lays out set cards.
2. Child cuts out numerals to match each card.
3. Child arranges cards in numerical order.
4. Child shows work to adult.

Hardest Level:
1. Child uses cutters to cut out lots of numbers.
2. Child lays them out in 2-digit numbers and reads them to an adult.

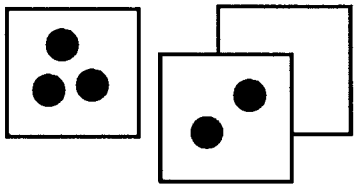
MAKING INSTRUCTIONS

Play Dough (makes enough for 4 children)
Mix thoroughly:
- 2 cups of white flour
- 1 cup of salt
- 1 tablespoon alum (sold in spice section of many stores)

Boil:
- 2 cups water
- 2 tablespoons salad oil
- few drops of food coloring
- flavoring extract if you want a great fragrance

Pour boiling liquid over dry ingredients. Stir until moist. It will have many lumps. Let cool until easily handled. Knead until very smooth. *Continue cooling until it is room temperature.* Seal in air tight containers when cool. (Small margarine tubs work well.) If the children put the lid on, this lasts for many weeks.

Set Cards



Make dot cards 0–10 or more for children to use in matching. Be sure to contact or laminate these on both sides. Store cards, play dough, cookie cutters, and rolling pins in standard box.

Feely Box—Three in a Row (2 Children)

Box ingredients→ large Feely box

wooden, plastic, cardboard, or other hard numerals
(4 each, numerals 0–4, or 4 each, numerals 5–9)

half box for storage

PLAYING INSTRUCTIONS

1. Partners share one Feely Box of numerals.
2. Each child has his/her own game board (matching the numerals in the can).
3. The children take turns reaching into the Feely Box, selecting a numeral, naming it, then pulling it out to check.
4. If the player was correct in naming, he/she places the numeral in the correct spot on his/her game board.
5. The first player to get three in a row wins.
6. More often the children would rather play to black out—this is just fine—lots more practice!

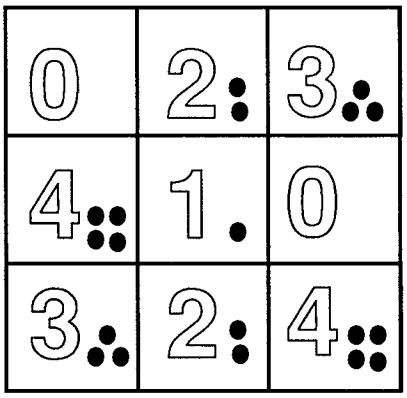
MAKING INSTRUCTIONS

Feely Boxes
For each box:
1. Find a dark colored stretchy sock.
2. Push a cottage cheese carton or plastic refrigerator container into the foot.

Numerals
These could be cardboard, wooden or metal, such as the ones sold in hardware stores for homes, or plastic, such as the magnetic kind or those sold for games.

Gameboards

Cut gameboards 11 X 8-1/2. Draw lines evenly to mark off a grid as illustrated. Take your numerals and trace them randomly on the boards. You can color the numerals with felt tip markers if you'd like. Cut the boards in half and hinge them at the back with filament tape so they'll fold to fit into the storage box. Store Feely Boxes with numerals separately.



Numerals Floor Mat (1–6 Children)

Box ingredients→ task cards floor mat

junk box for storage

PLAYING INSTRUCTIONS

1. Spread mat on floor.
2. Children sit around edges of mat.
3. One child (in stocking feet) prepares to jump.
4. Hold up a numeral card. The children around the mat call out the numeral name. The child on the mat jumps to that numeral. Continue until the child jumps to all the numerals on the ring. (Be careful not to have this be a testing time. Give all needed help.)

VARIATIONS: (from Irene Wing of Berryessa School District, San Jose, CA)

1. Jump on all numbers in order (1–9).
2. Jump on all the numbers in sequence from 9–0, from 6–1, etc.
3. Jump on all the even numbers (or odd).
4. Jump on the number that tells:
   a. your age
   b. how many ears you have
   c. how many legs a dog has, etc.
   d. our classroom number
   e. how old you'll be on your next birthday
   f. not counting your thumbs, how many fingers do you have
   g. the number after 8, before 6, etc.
   h. your favorite number
   i. number of pets you have
   j. the numerals in your phone number
   k. the numerals in your address
   l. the numerals on a clock

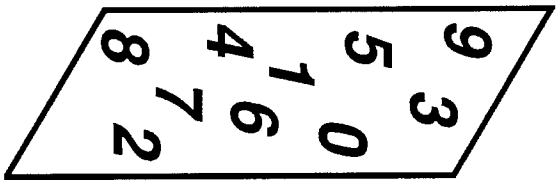
Let your imagination go—ask the children to help add more ideas.

Other uses: Make numeral cards for visual or auditory memory. For those who are very sophisticated: the numeral that stands for two tens and seven, etc.; the sum of 2 + 3, etc.

MAKING INSTRUCTIONS

Floor Mat

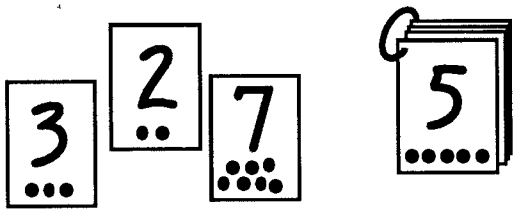
1. Use a dark color fabric backing about 1 yd. X 1-3/4 yd.
2. Purchase felt, fake fur or other bright fabric from which to cut numerals. A variety of colors is nice.
3. Cut large numerals from fabric.
4. Sew, glue or iron on with Stitch Witchery or a similar product.



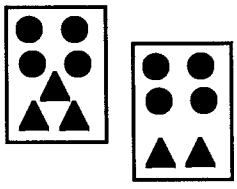
Numeral Cards

Make these from sturdy tag. Join together with a binder ring. Store in a junk box.

Irene's wonderful ideas:
If you're lucky enough to get parent helpers or student tutors, Irene's ideas (listed above) are great set up on cards and joined either with a binder ring, or left as a deck from which student draws task. If you're artistic, sketch these so they can be self-directing.

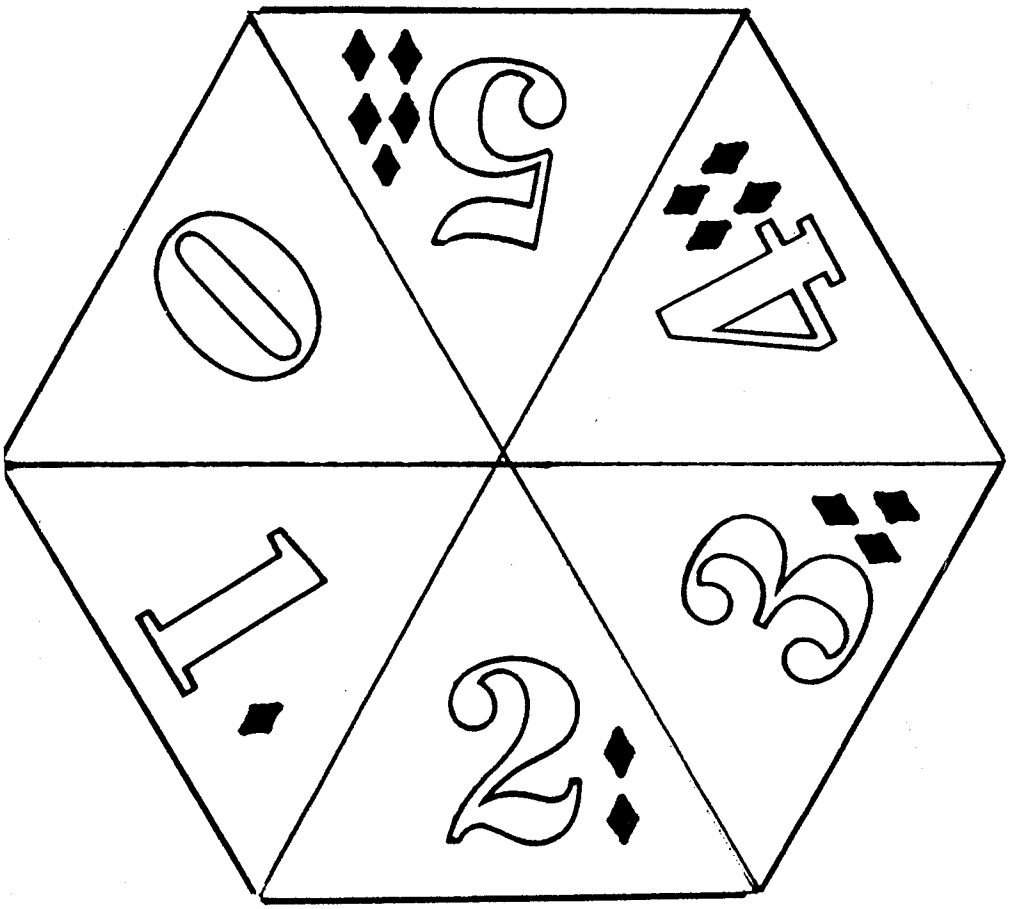


Set cards can be fun too. Sets above 5 can't be instantly seen, therefore set them up in two parts so children "count on": 4...5, 6, 7.



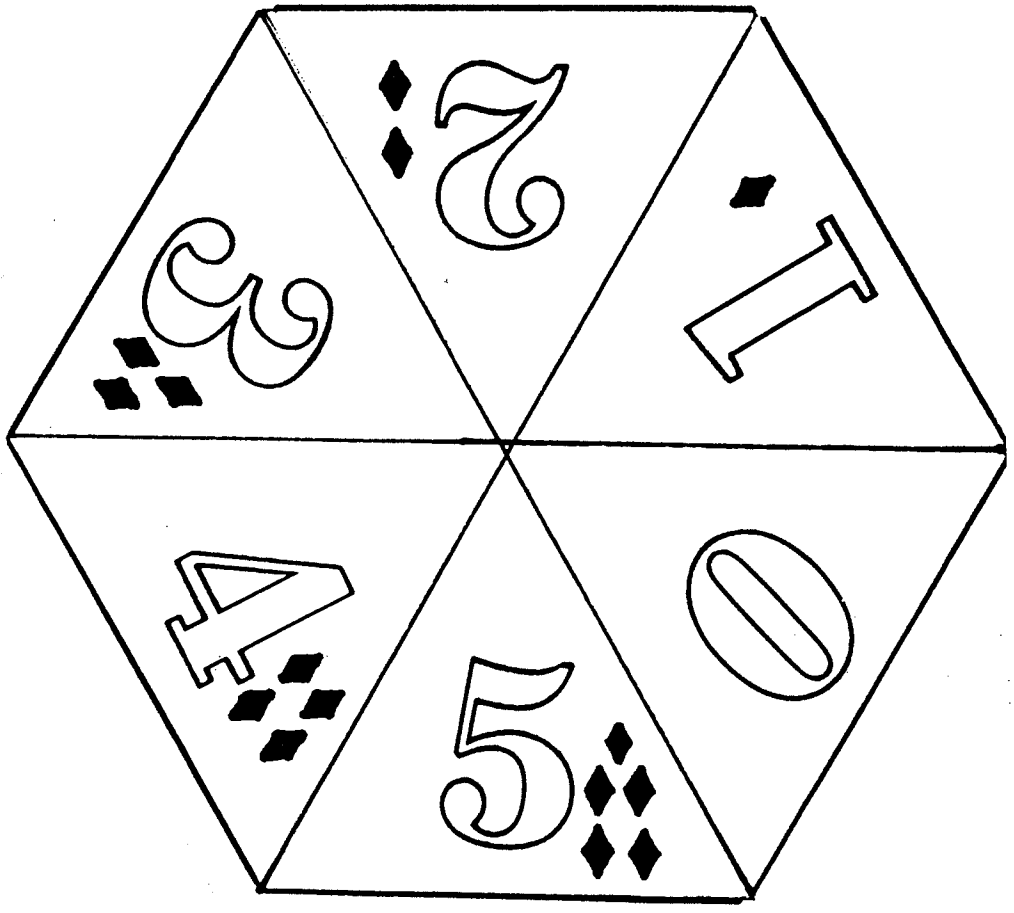
Blacklines

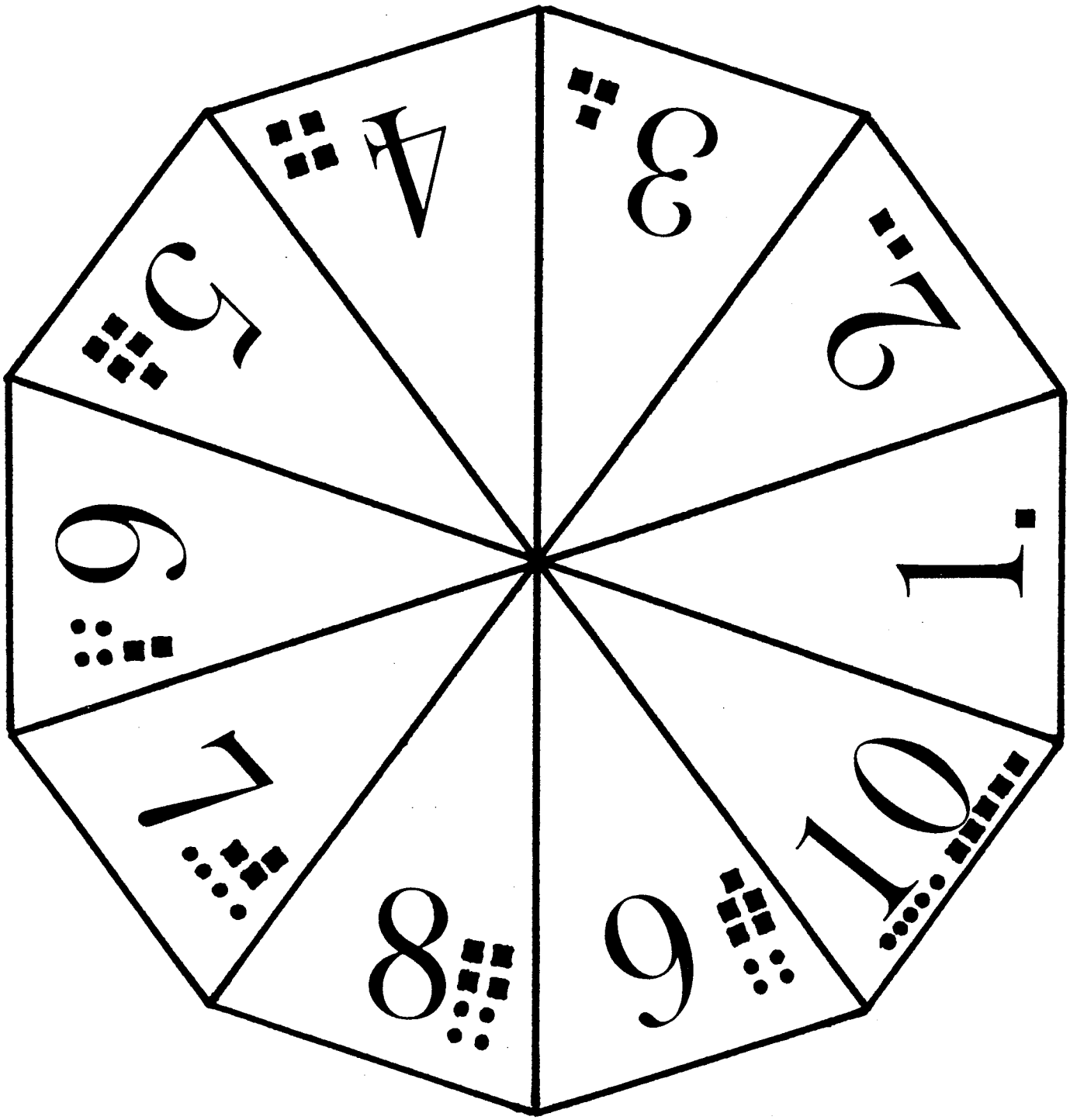
Patterns, cards, spinners, and other materials you'll make for the Practice & Enrichment Boxes described in this packet.



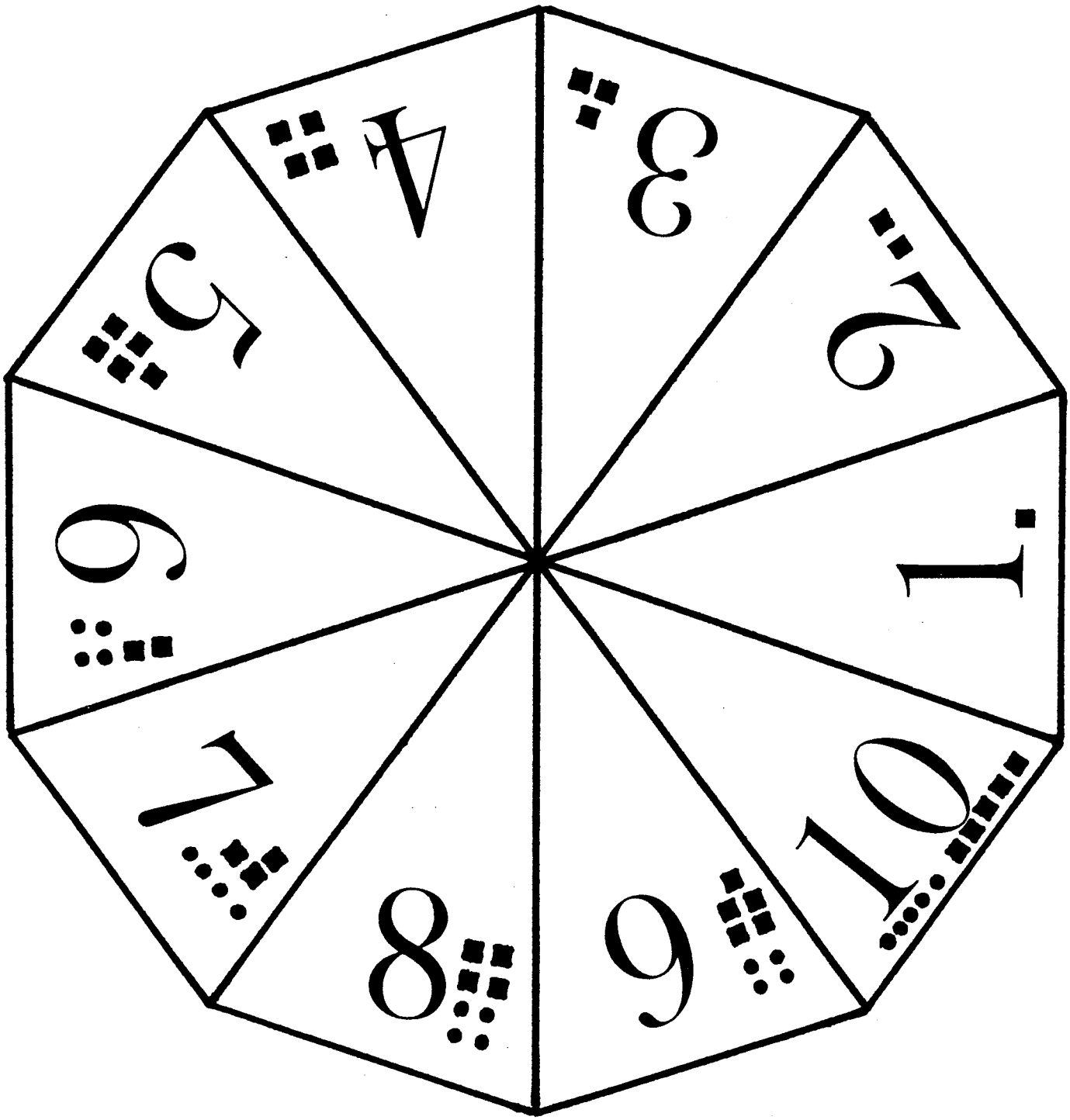
Spinner Counting

Spinner Tops



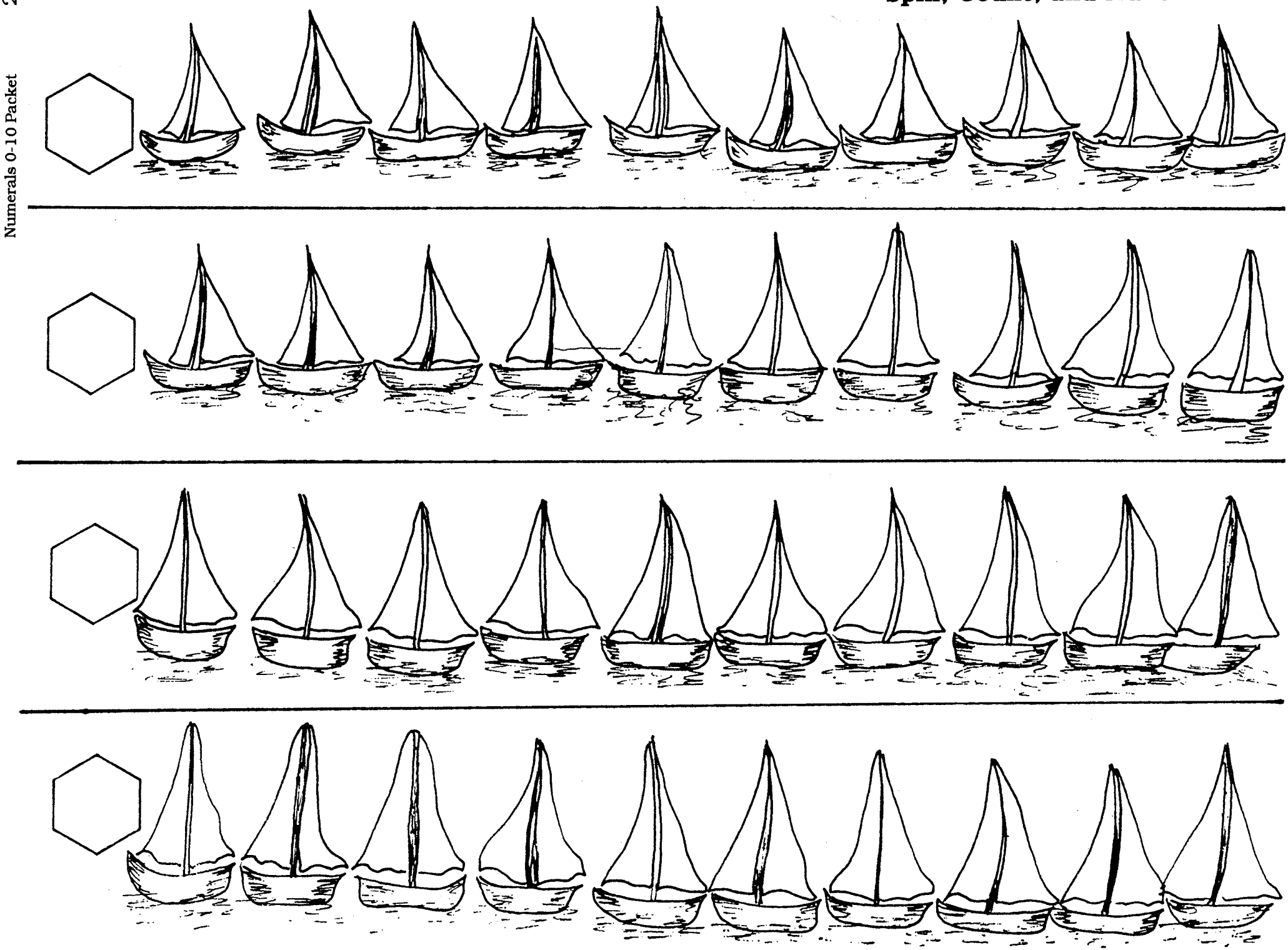


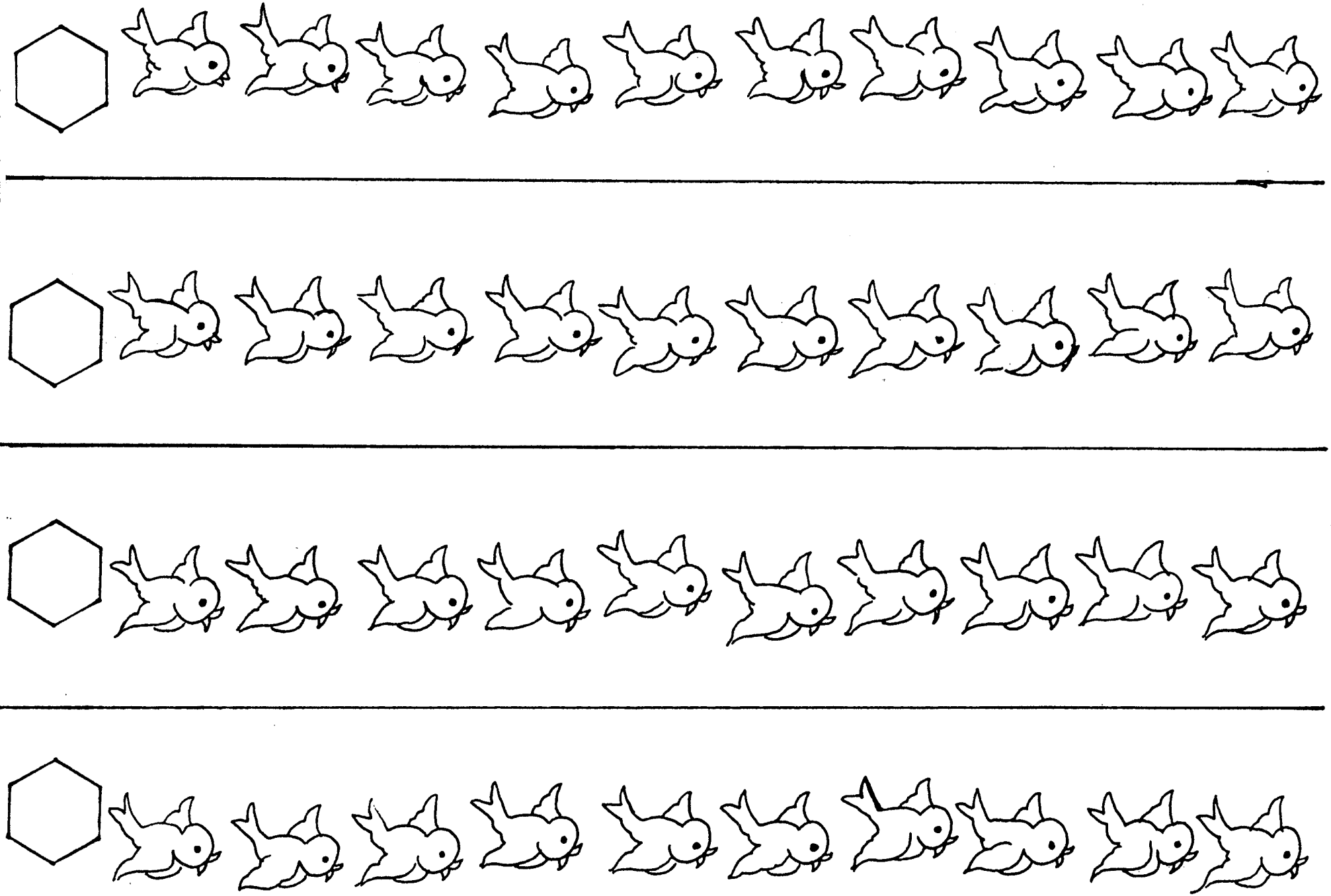
Spin, Count, and Make a Book
Spinner Top

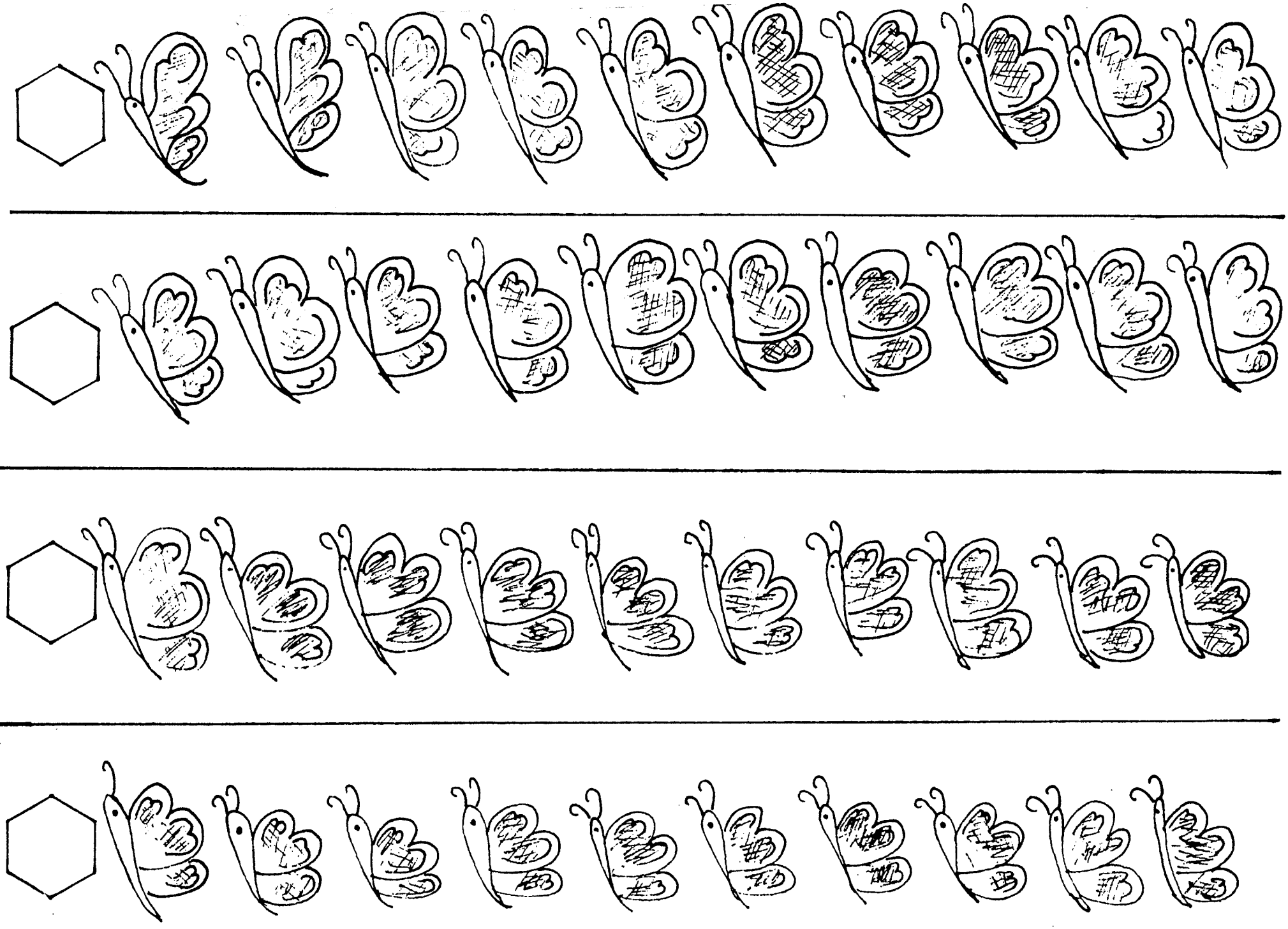


Spin, Count, and Make a Book
Spinner Top

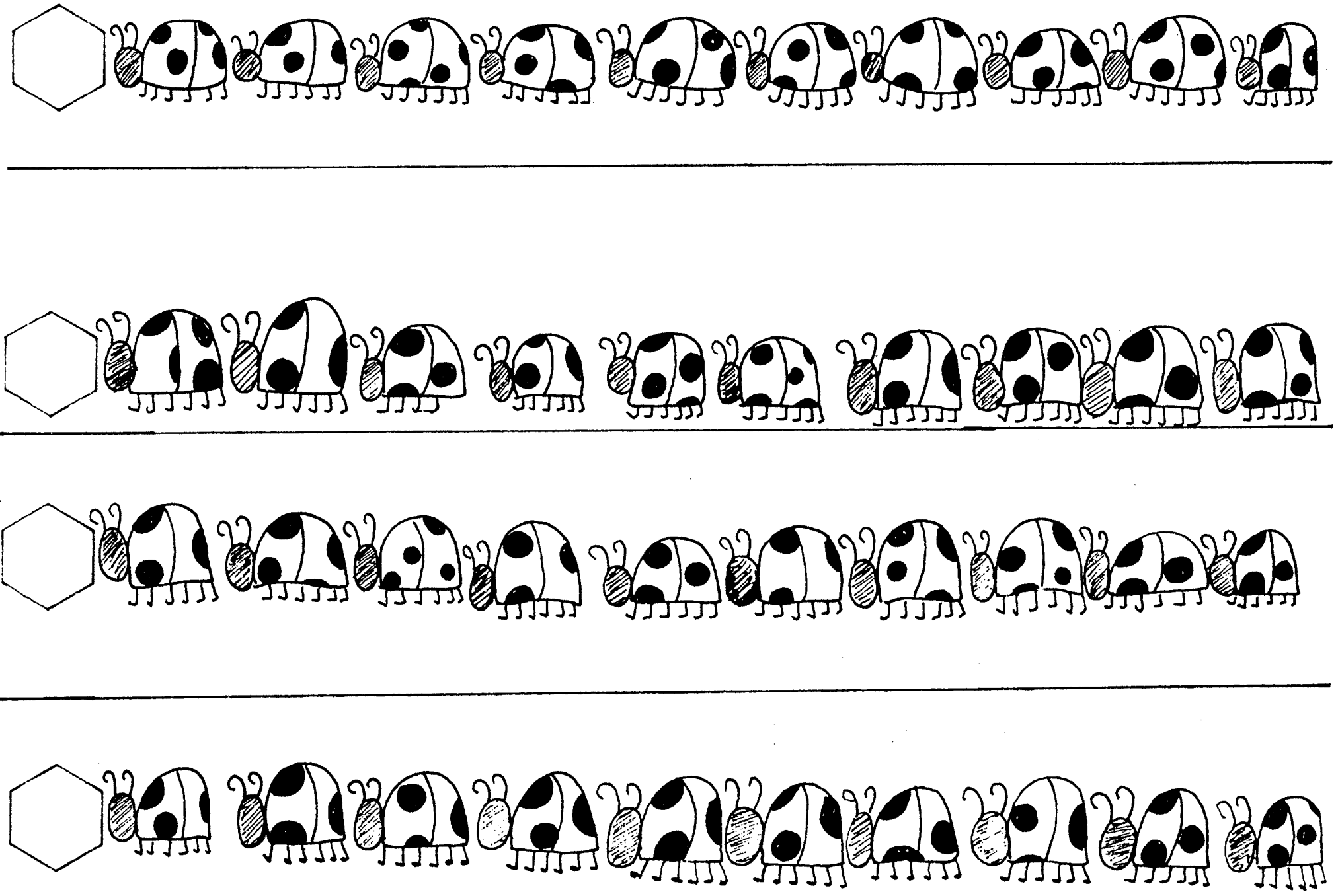
Spin, Count, and Make a Book



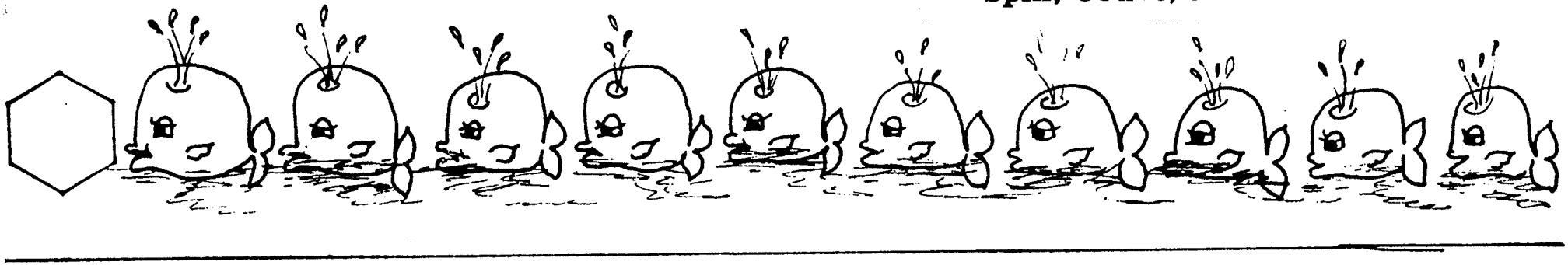


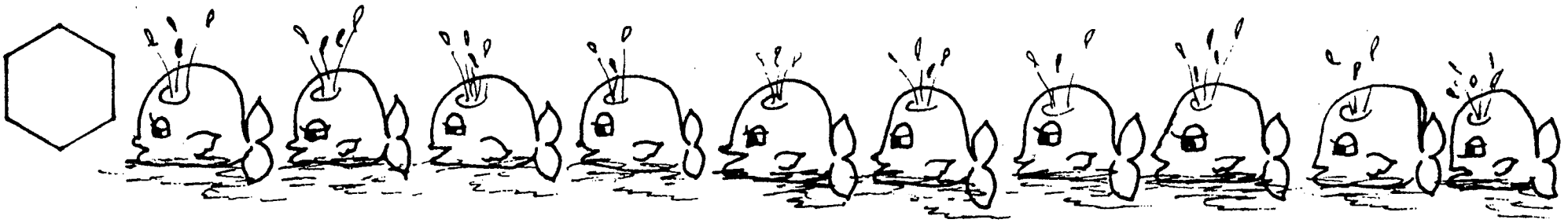


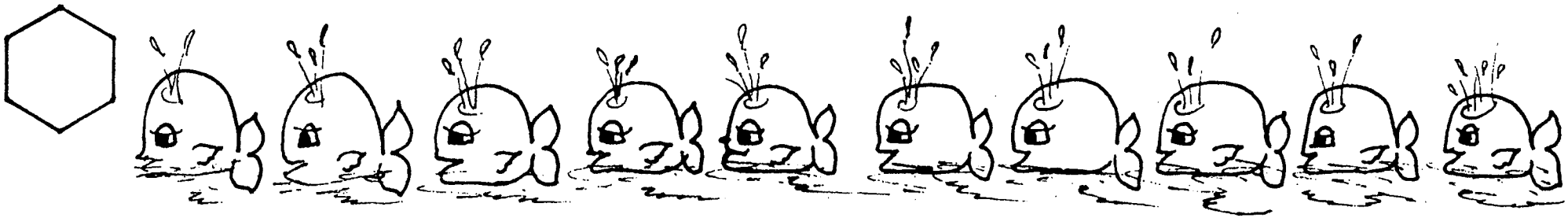
Spin, Count, and Make a Book



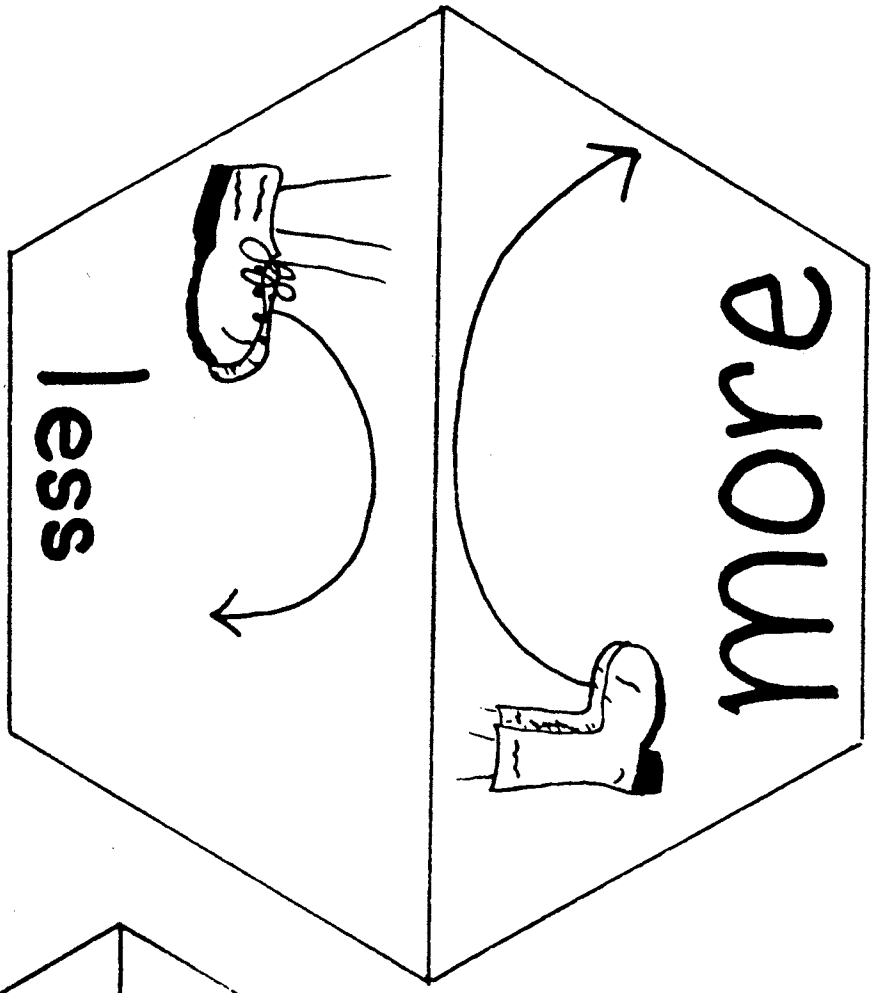
Spin, Count, and Make a Book

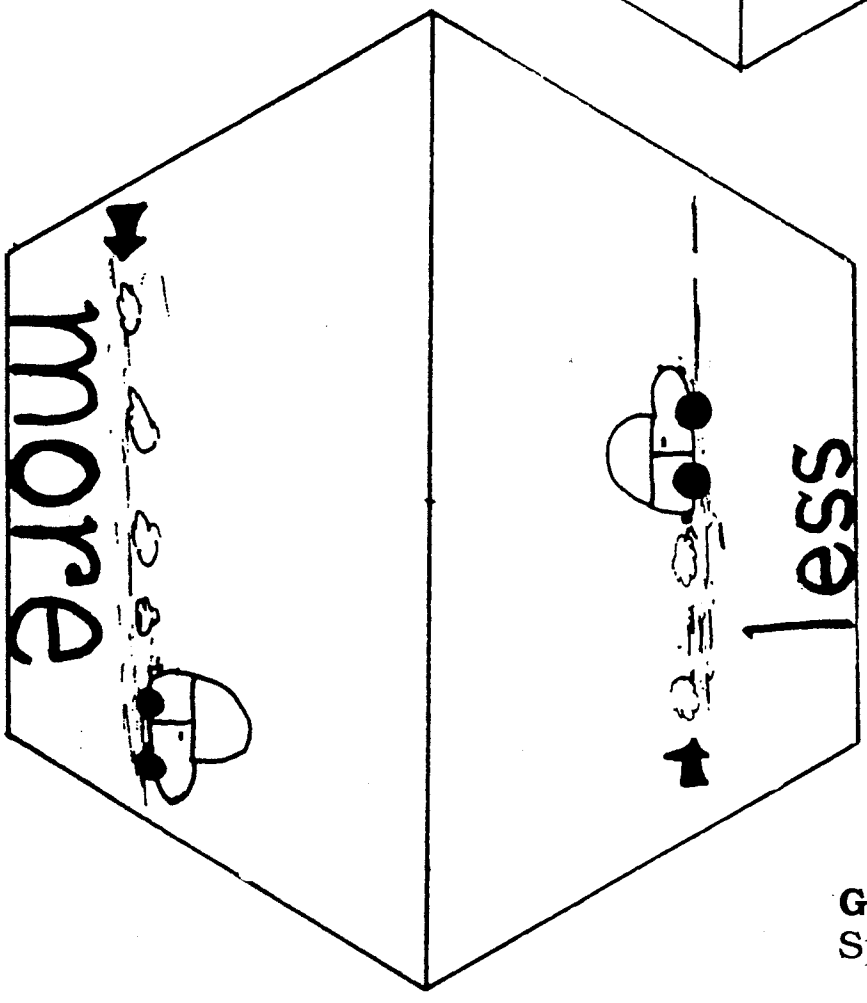






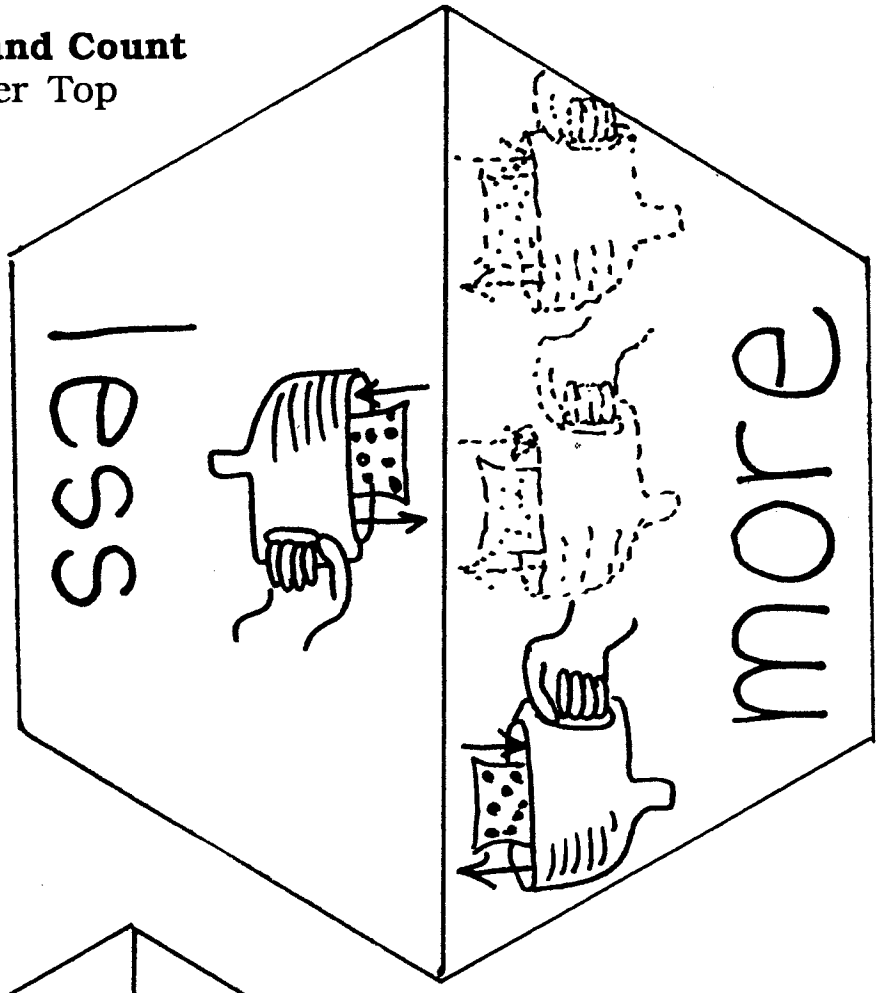
Jump and Count
Spinner Top

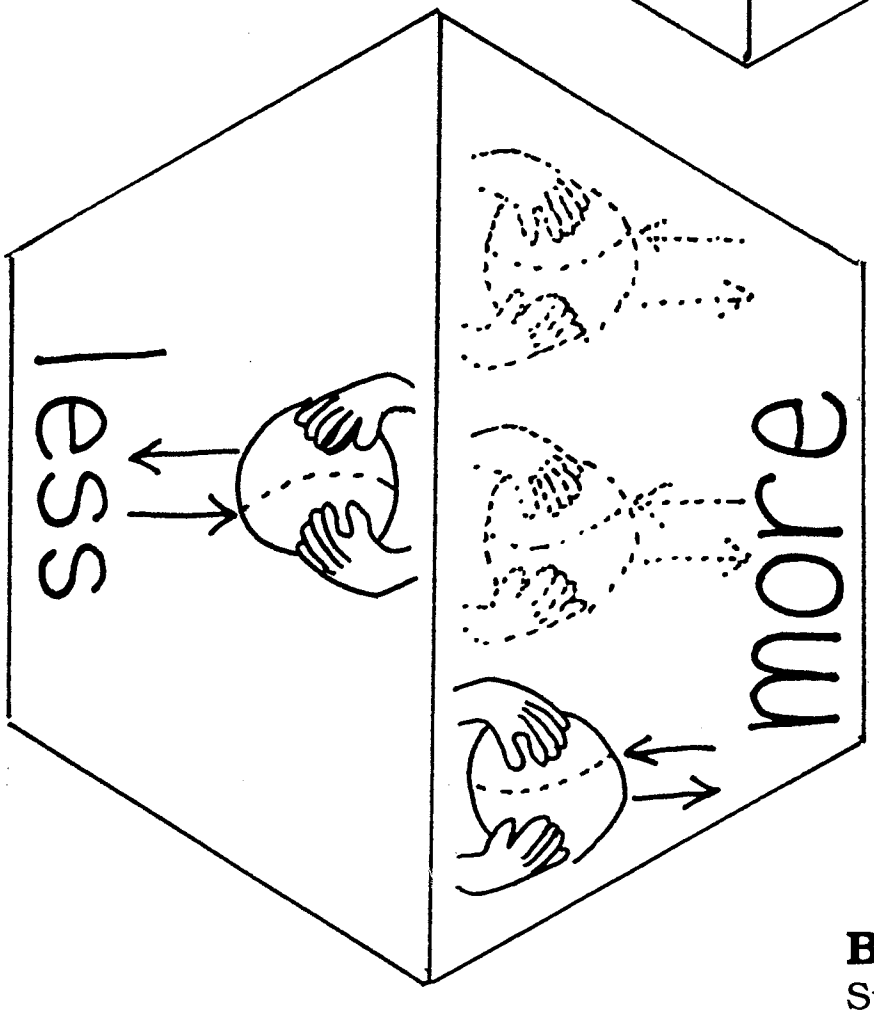




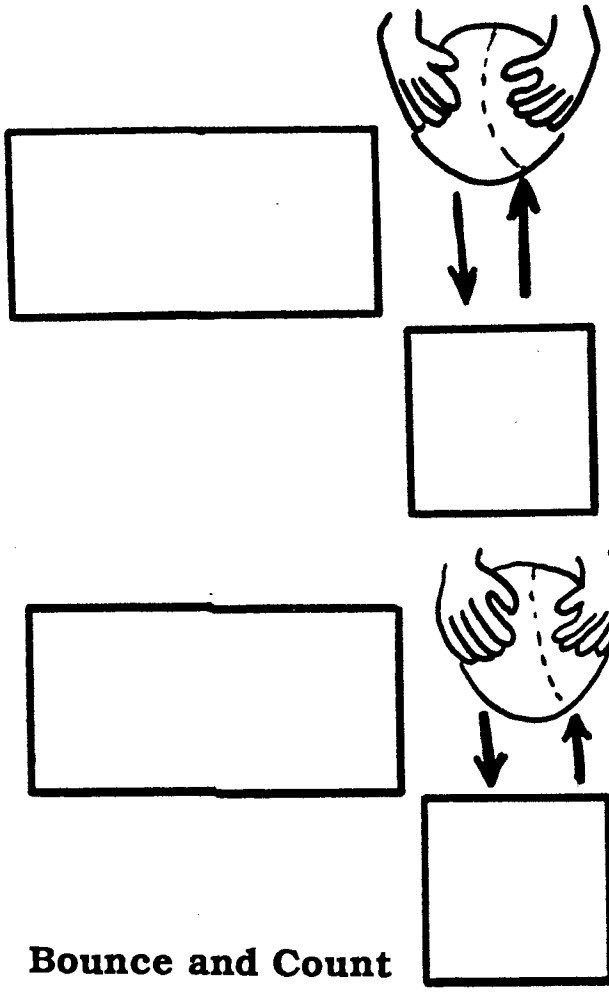
Grand Prix
Spinner Top

Toss and Count
Spinner Top



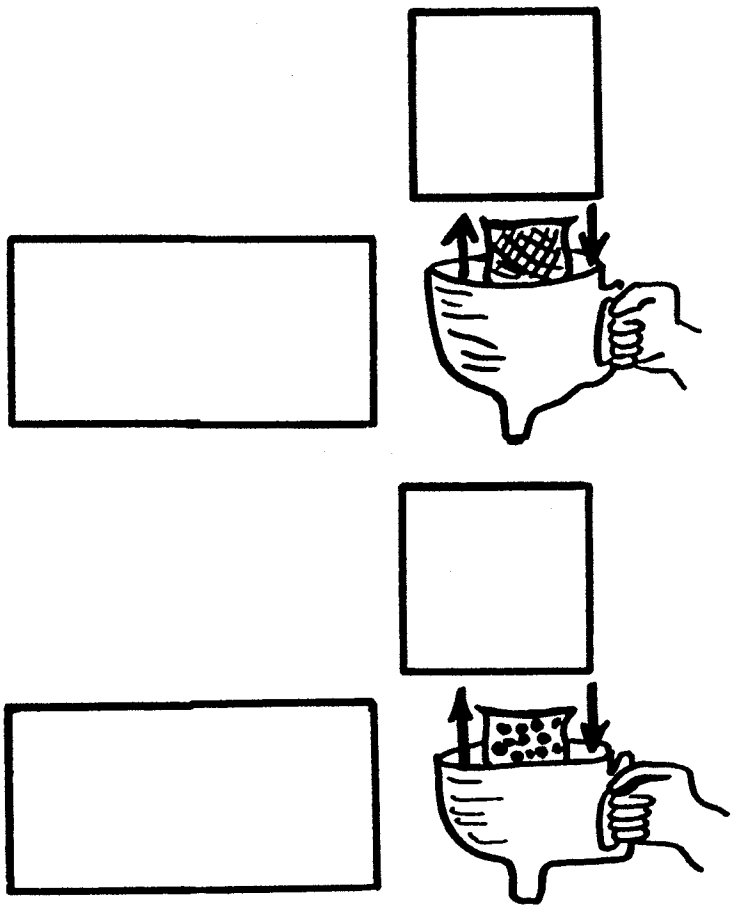


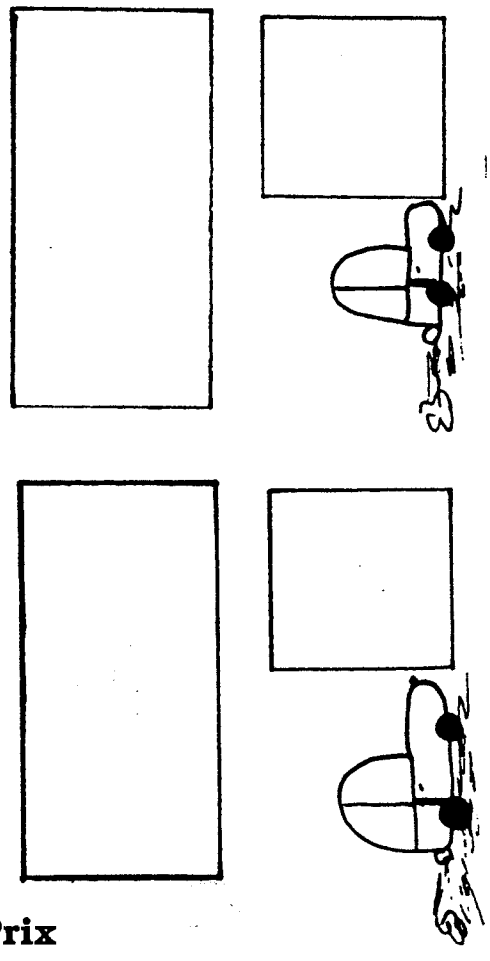
Bounce and Count
Spinner Top



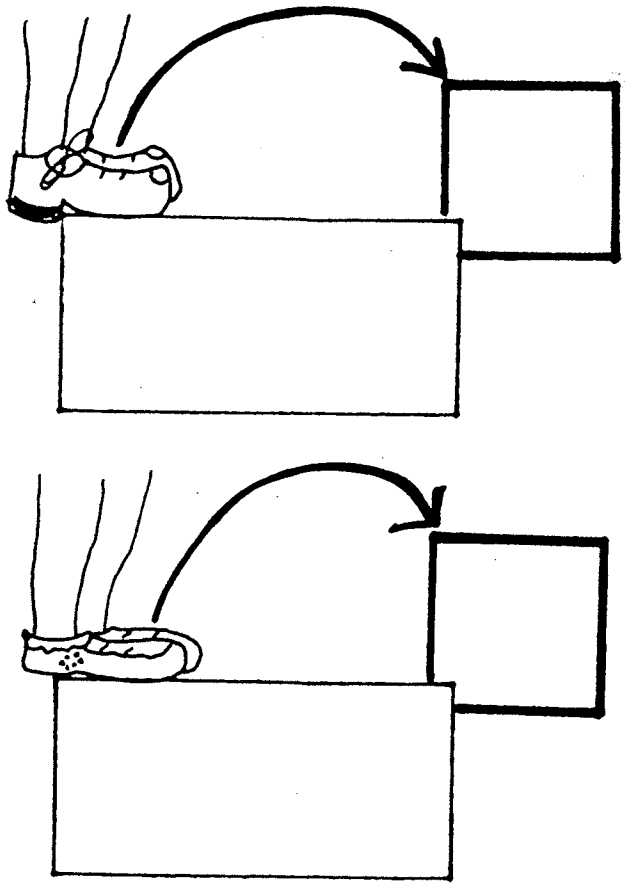
Bounce and Count

Toss and Count





Grand Prix



Jump and Count

Counting Jars

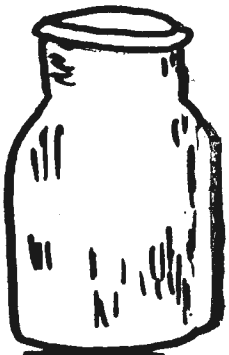
name: _____

guess

check

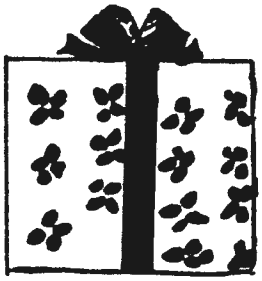
guess

check



guess

check



Gift Wrap Counting

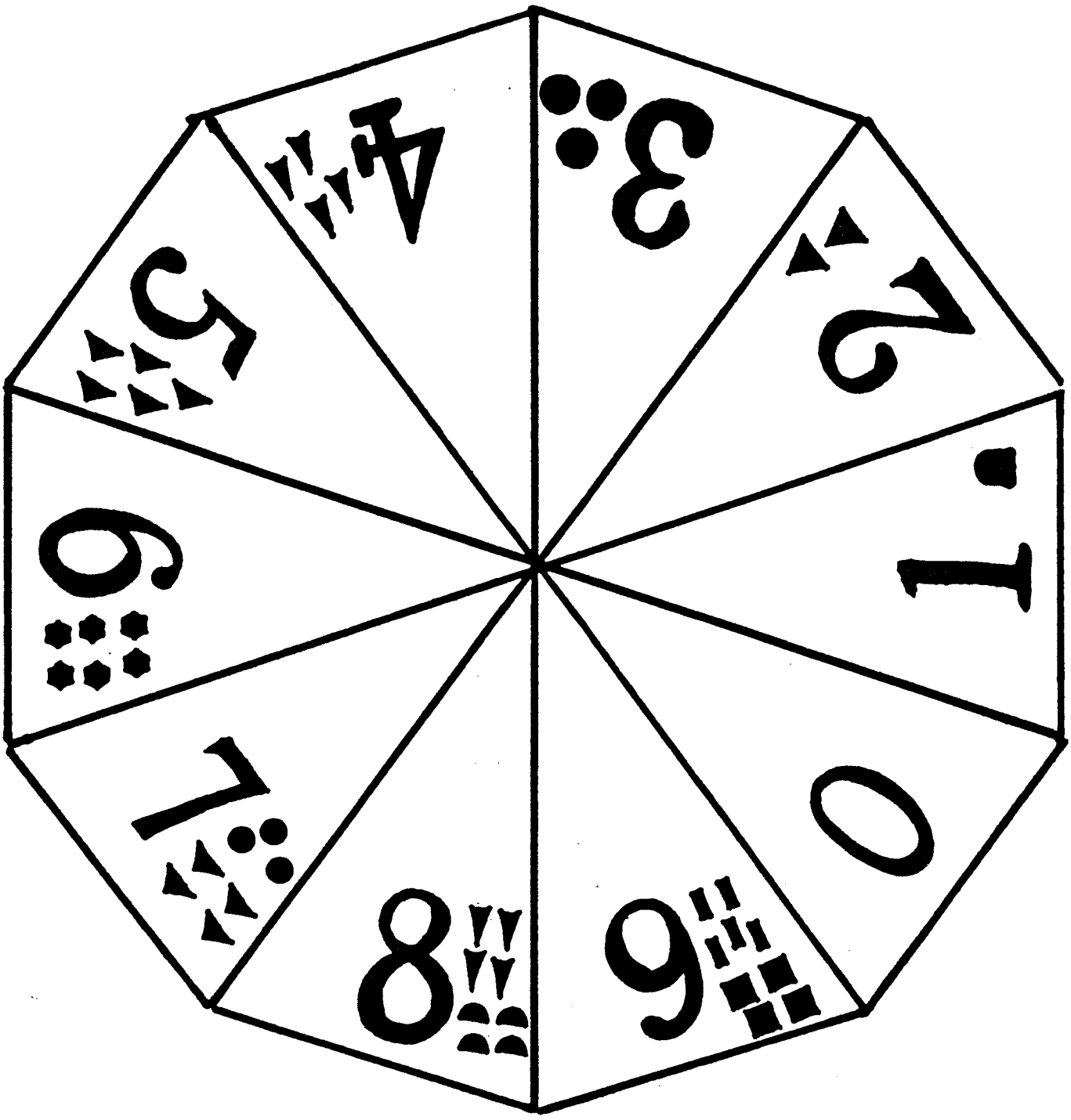
name: _____

guess

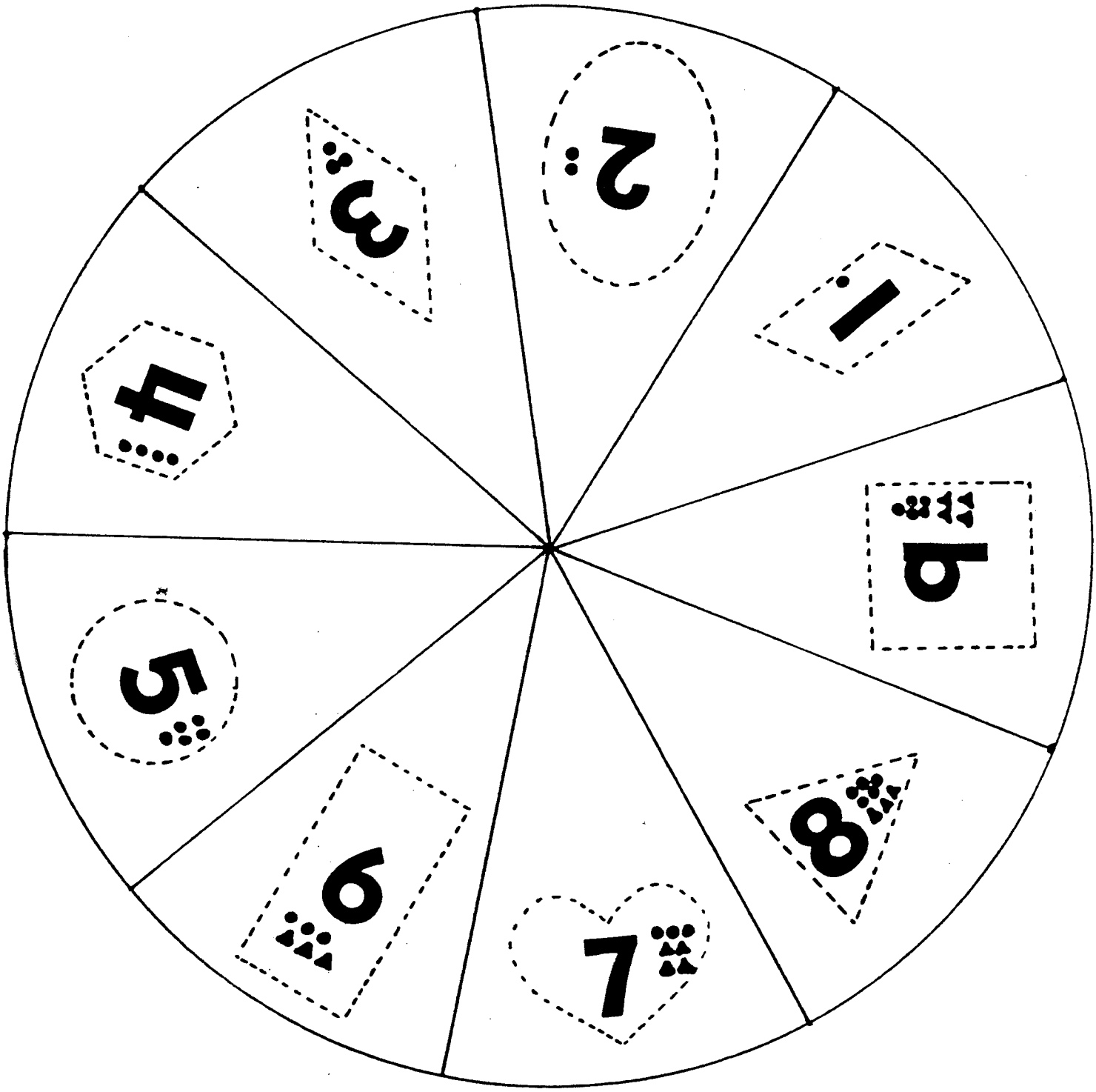
check

guess

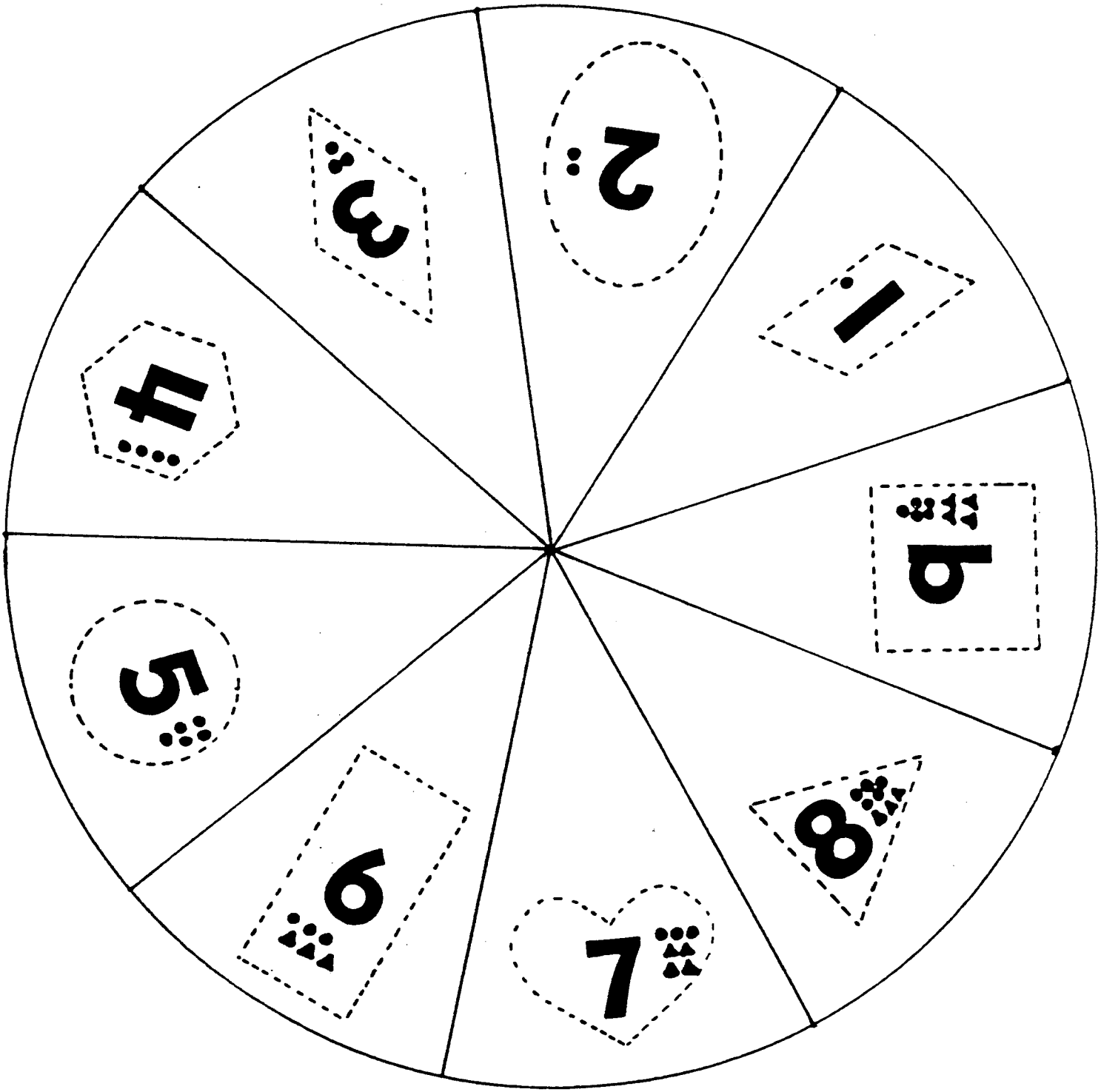
check



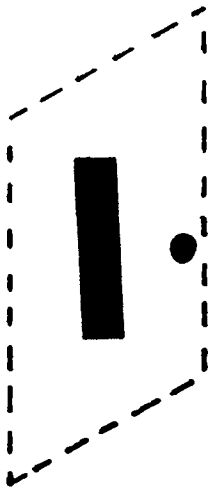
Spin 50
Spinner Top



Spinners and Scissors
Spinner Top

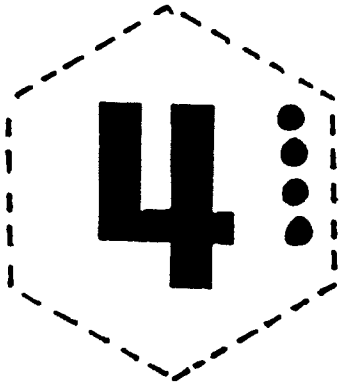


Spinners and Scissors
Spinner Top


1

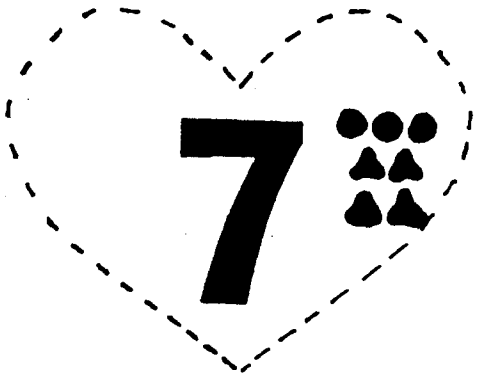

2


3


4


5


6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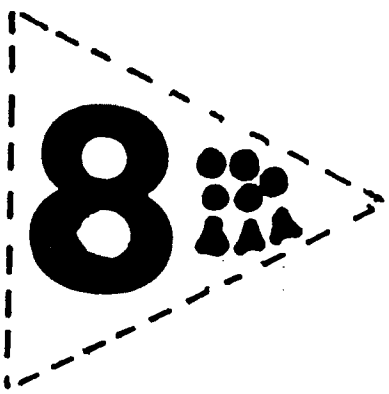
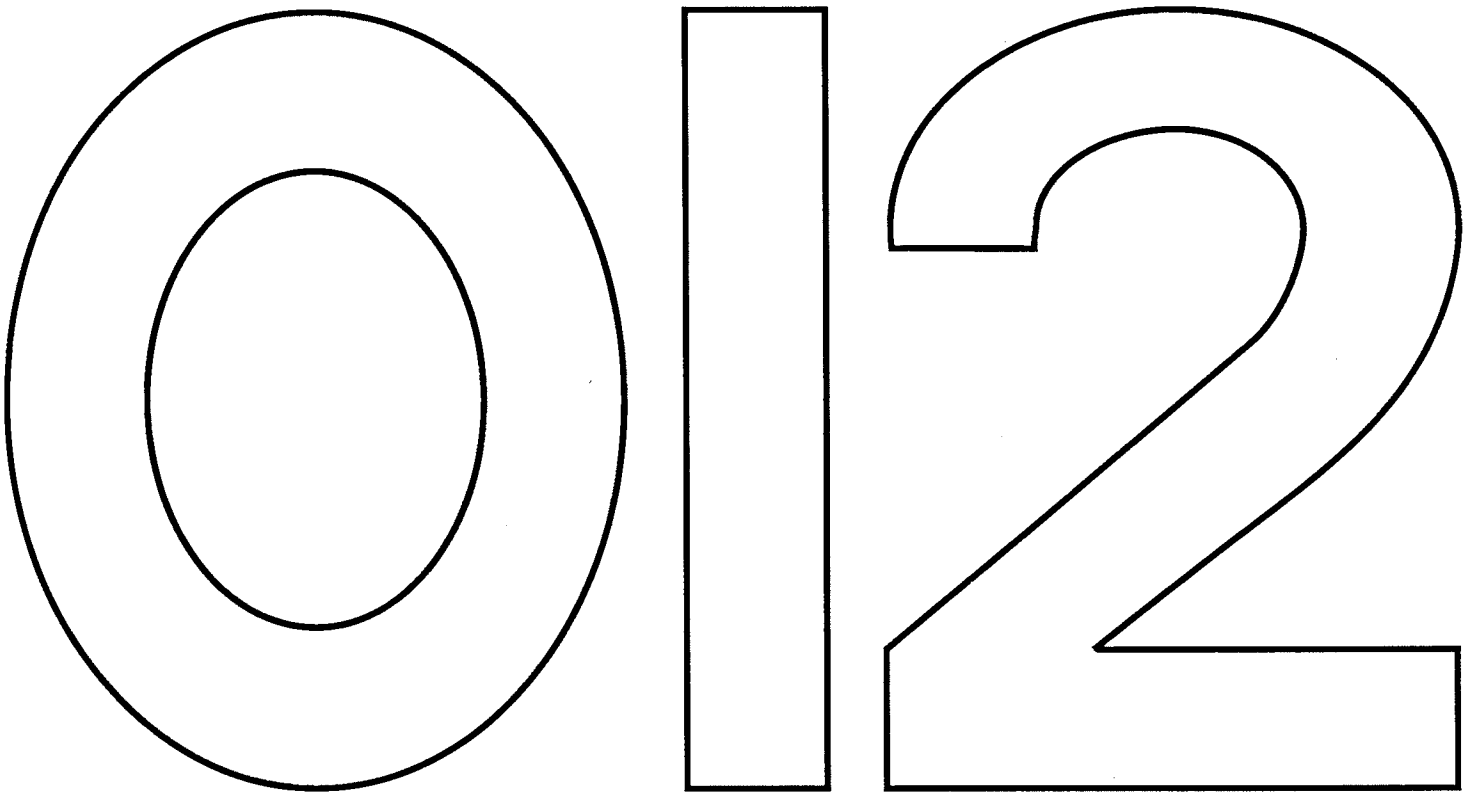
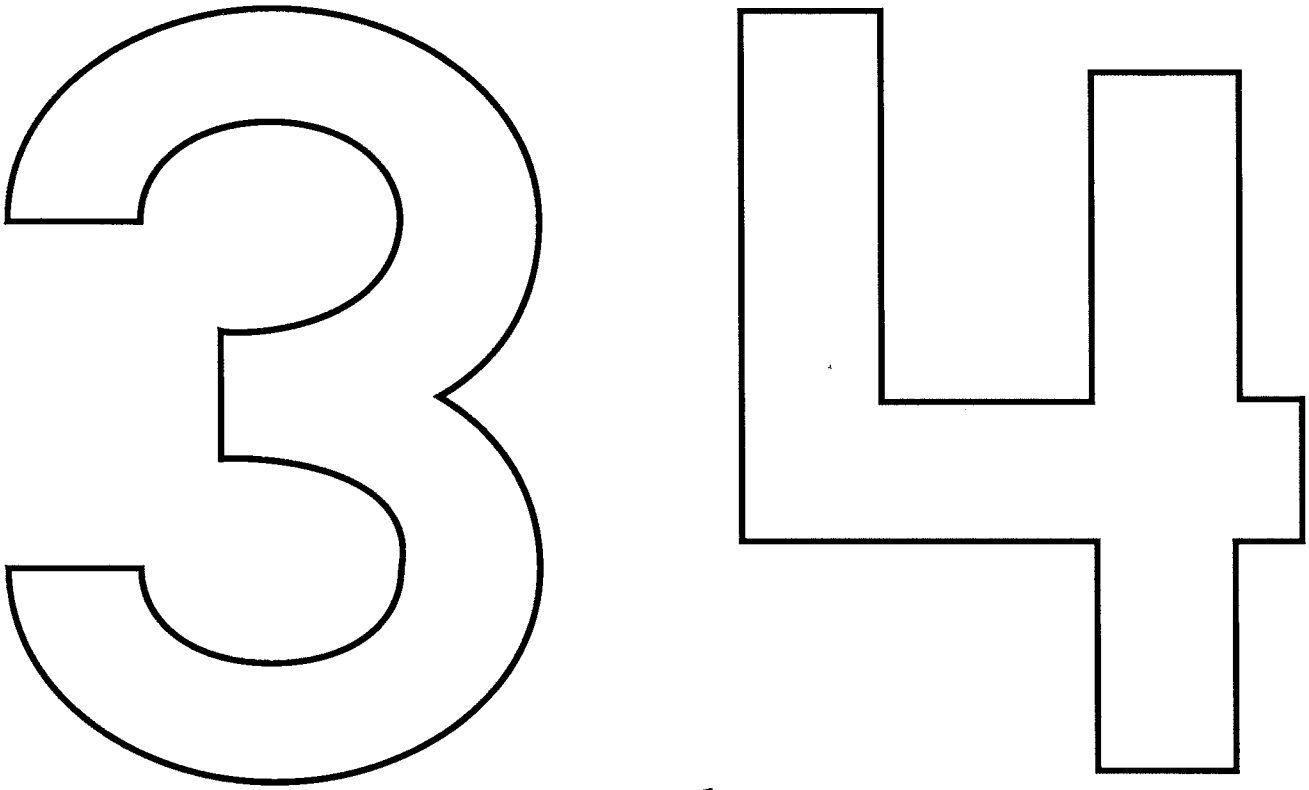
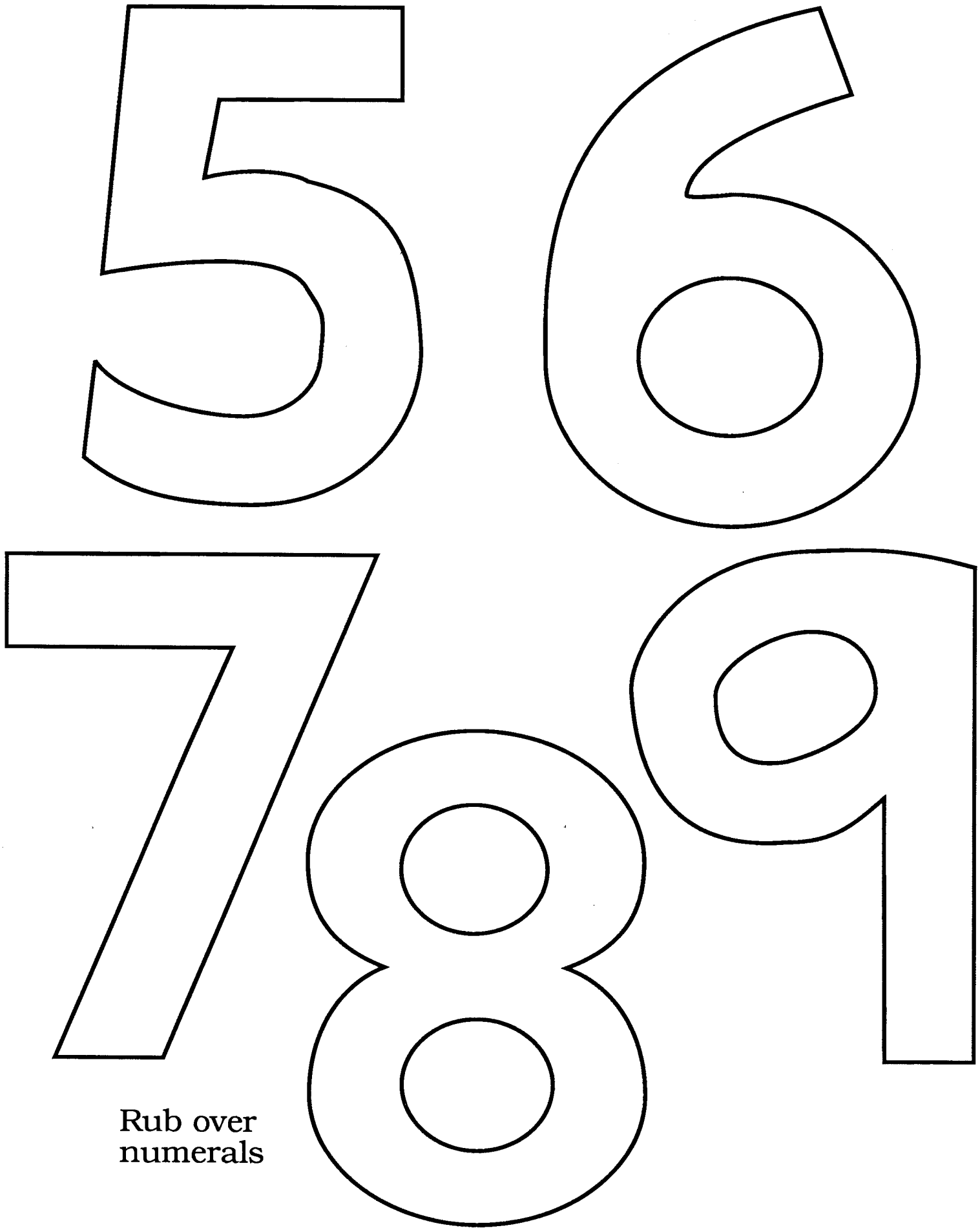

8


9



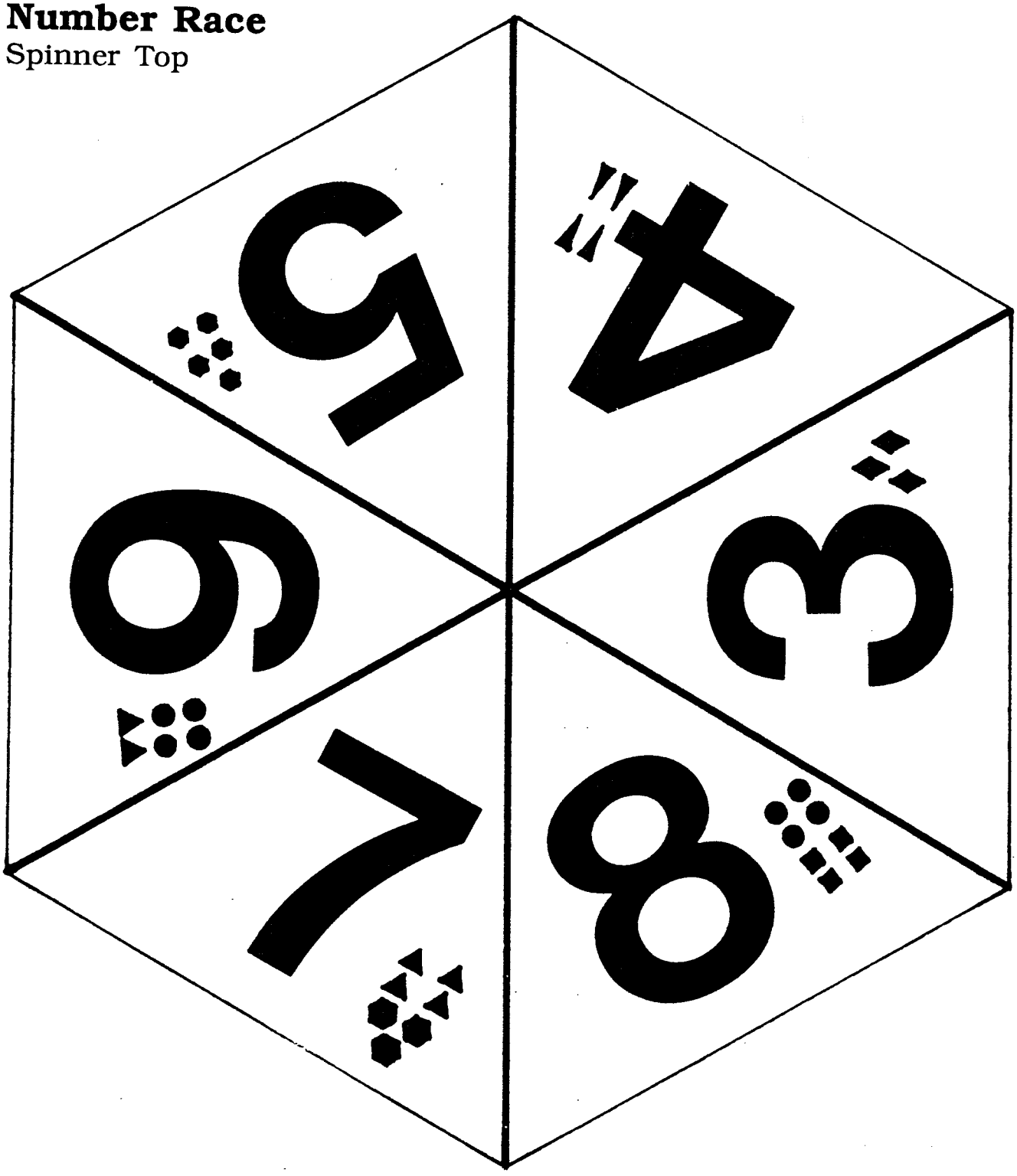


Rub over
numerals



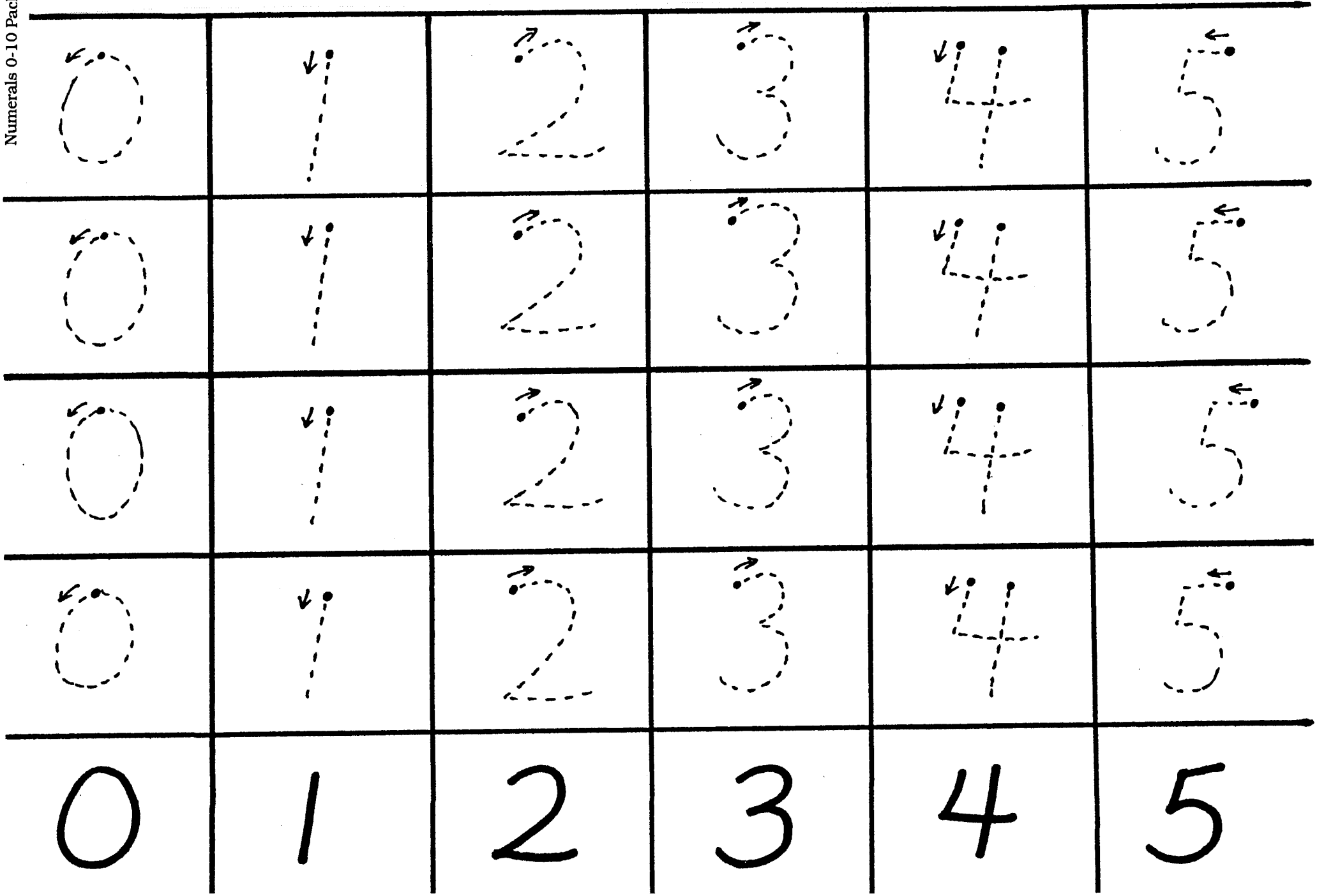
Rub over
numerals

Number Race
Spinner Top



Green Beans

name _____

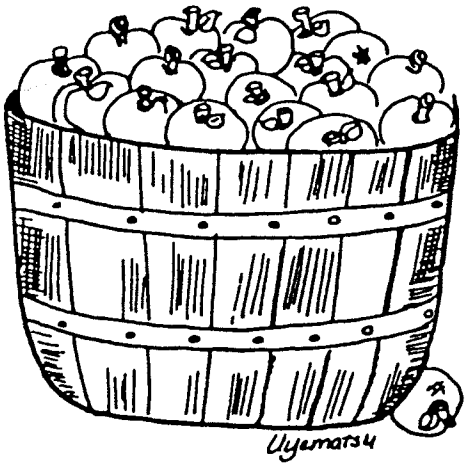


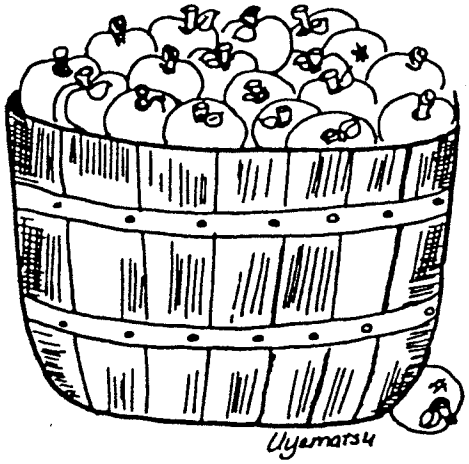
Green Beans

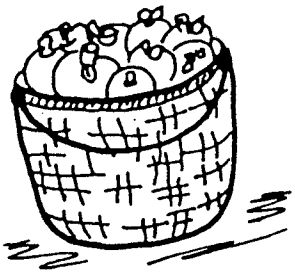
name:

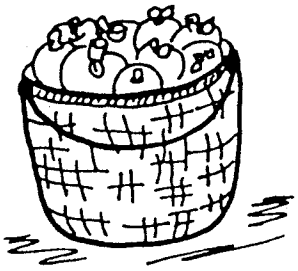
1	2	3	4	5	6	7	8	9	10
1	2	3	4	5	6	7	8	9	10
1	2	3	4	5	6	7	8	9	10
1	2	3	4	5	6	7	8	9	10
1	2	3	4	5	6	7	8	9	10
1	2	3	4	5	6	7	8	9	10
1	2	3	4	5	6	7	8	9	10
1	2	3	4	5	6	7	8	9	10

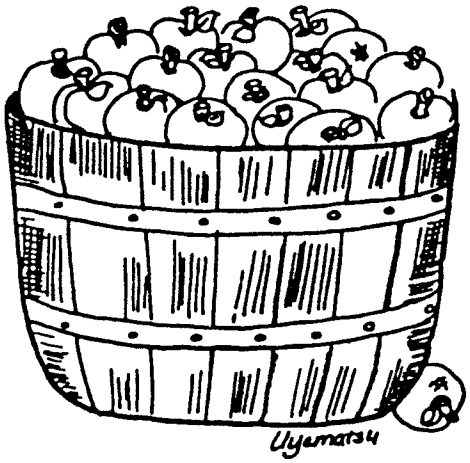
More and Less

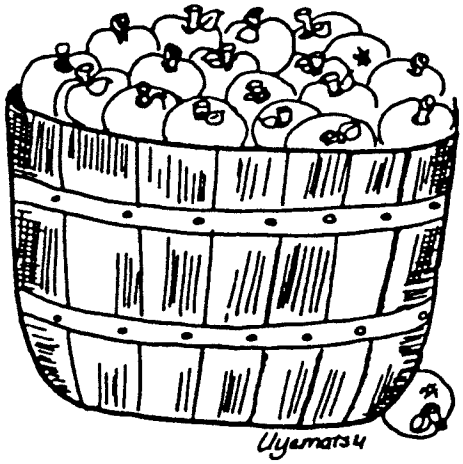


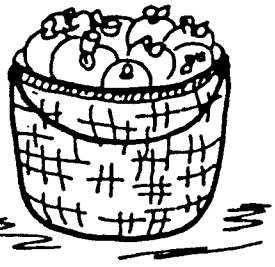


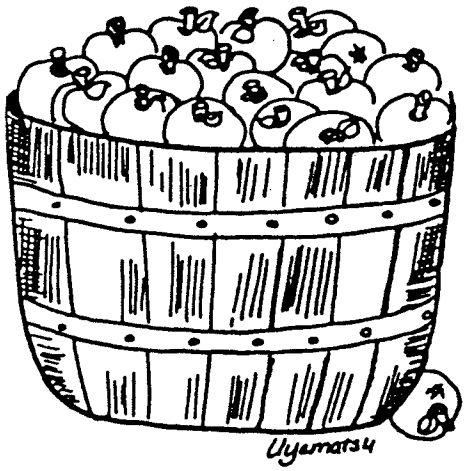


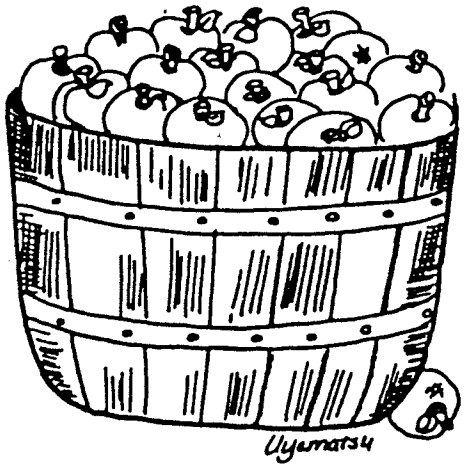


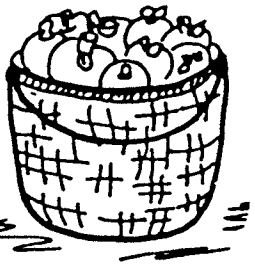


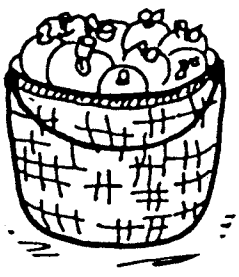


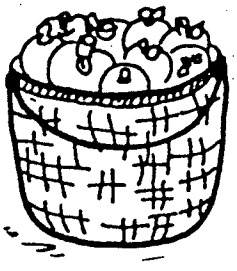


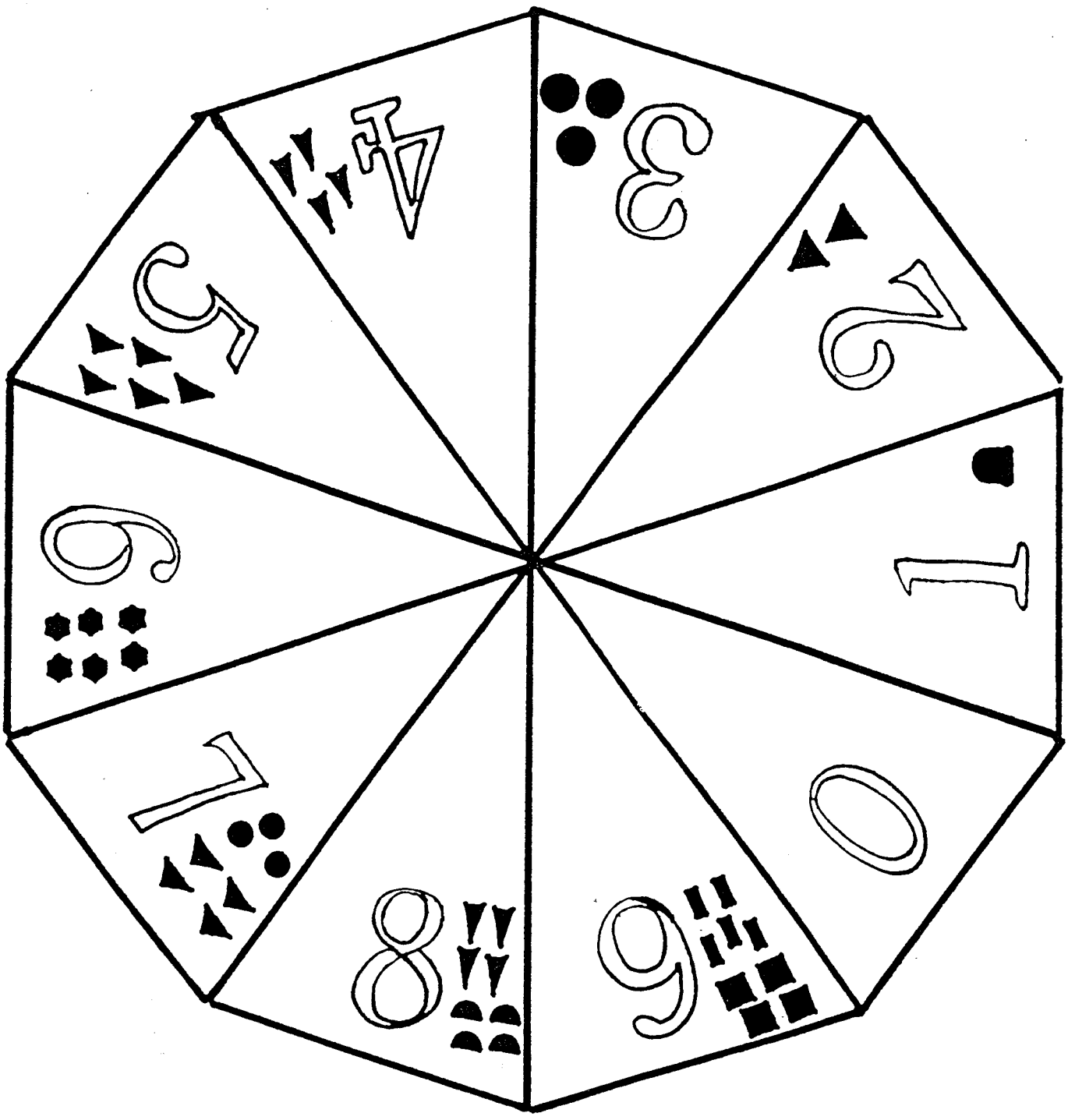






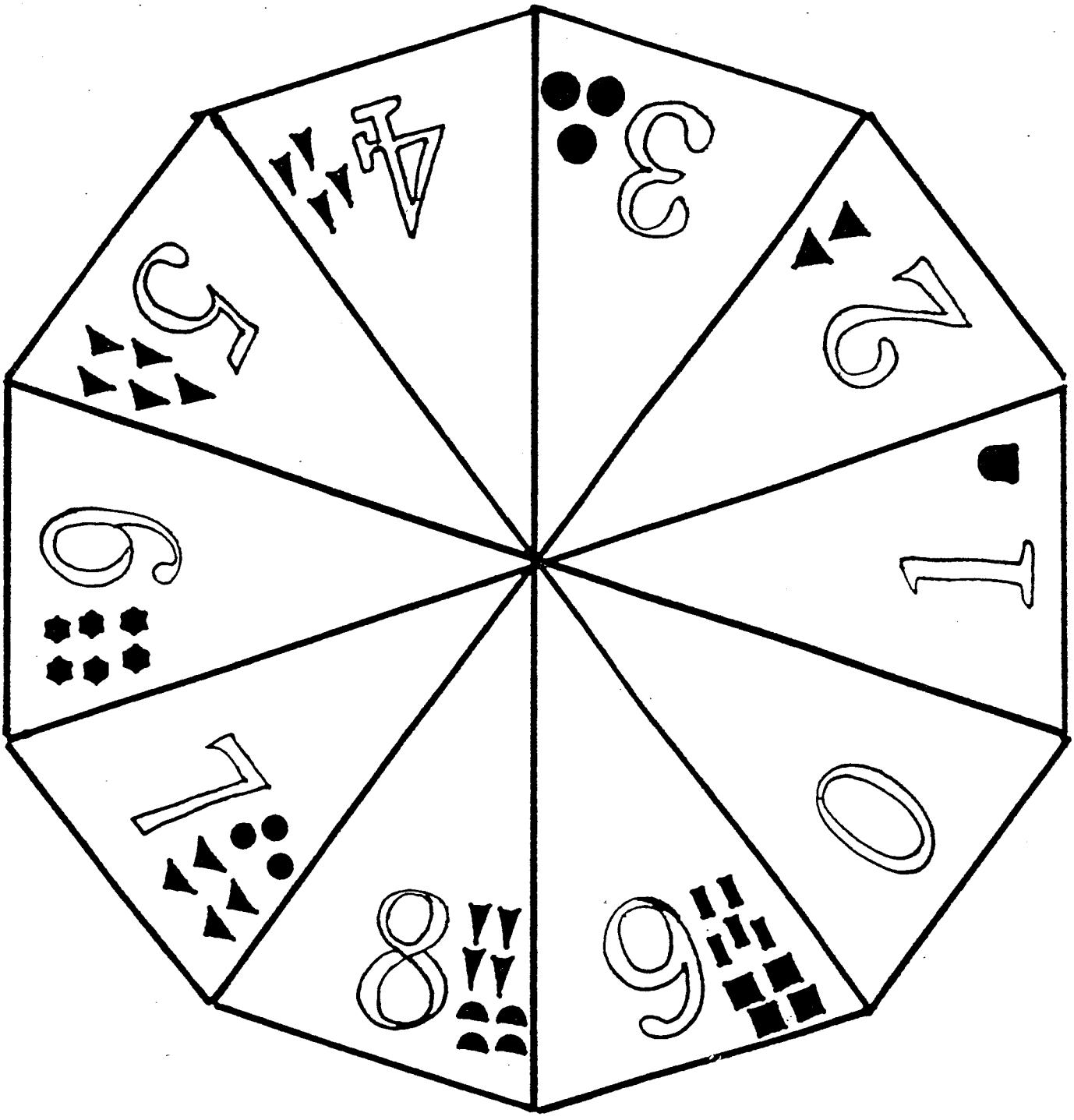






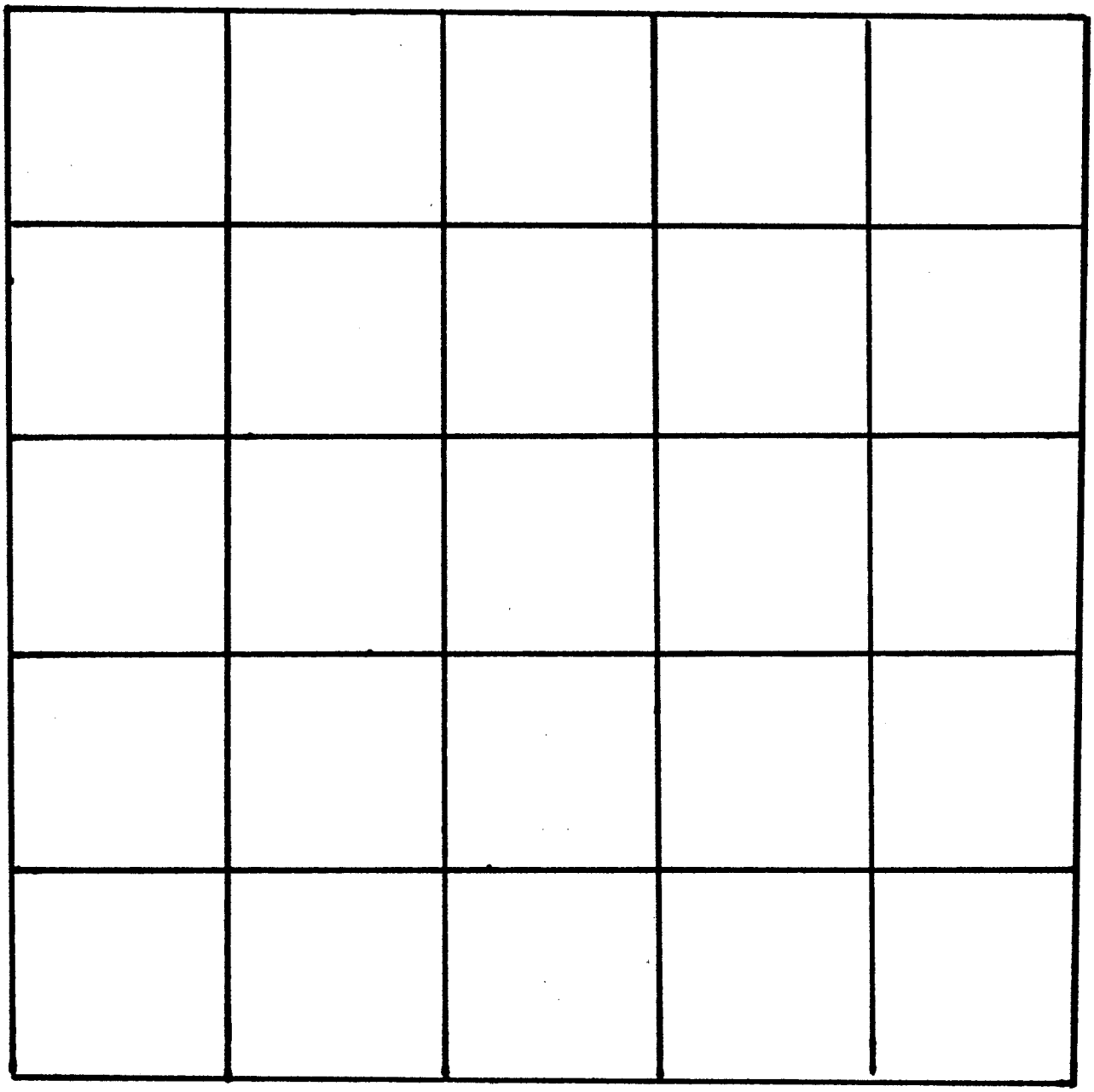
Newspaper Numerals

Color each numeral
a different color.

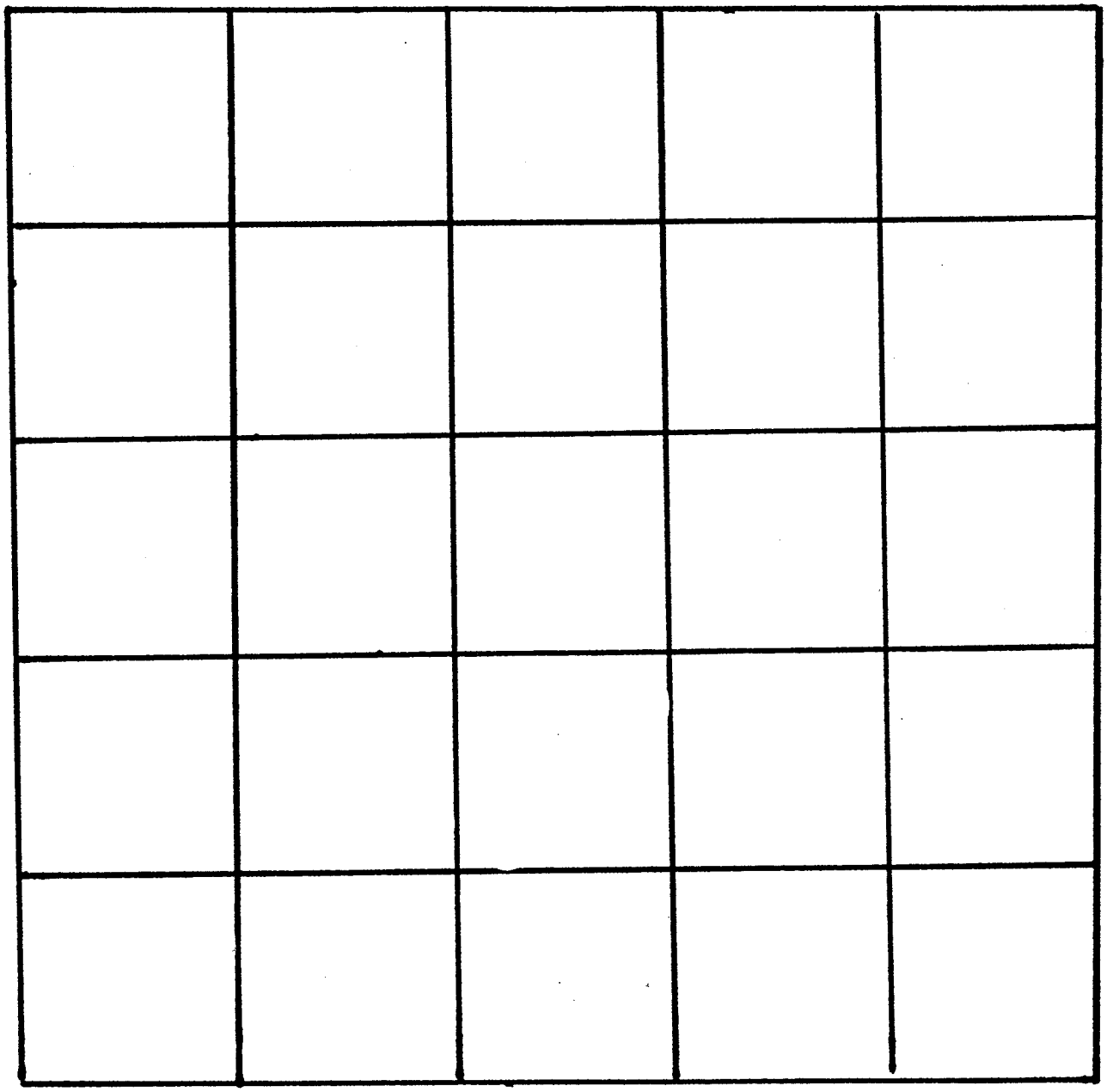


Newspaper Numerals
Color each numeral
a different color.

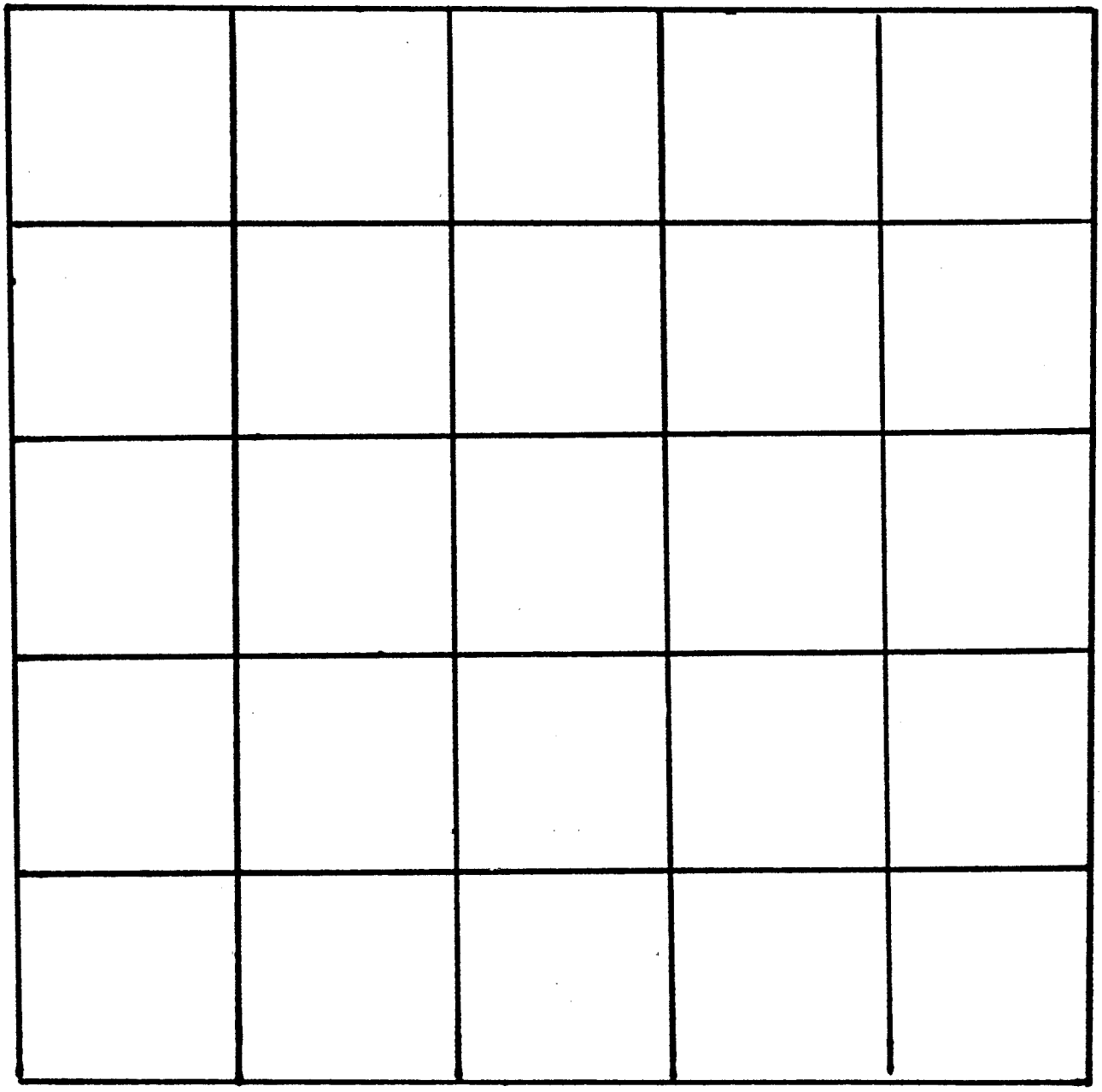
Gameboards (4)



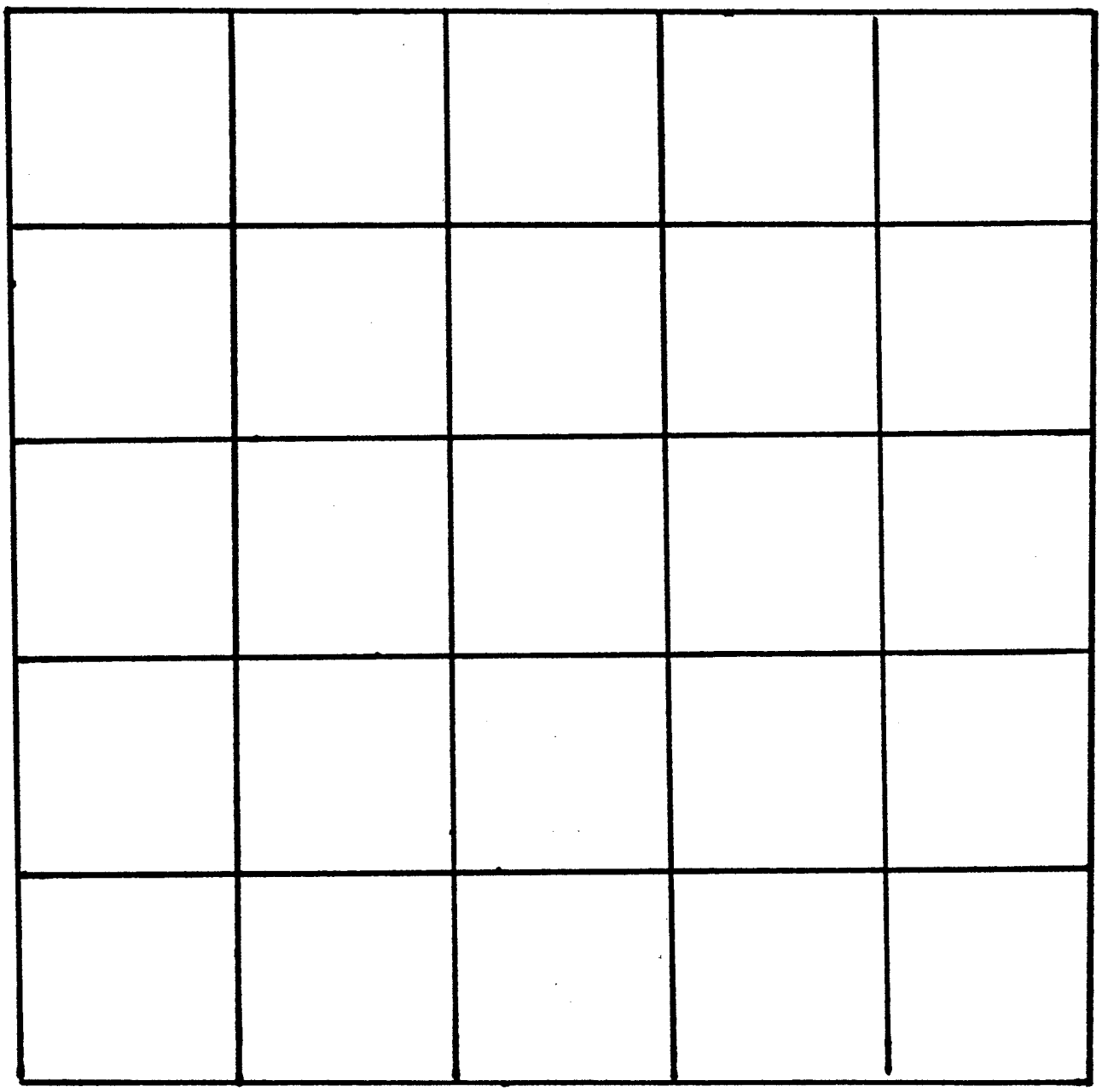
Gameboards (4)

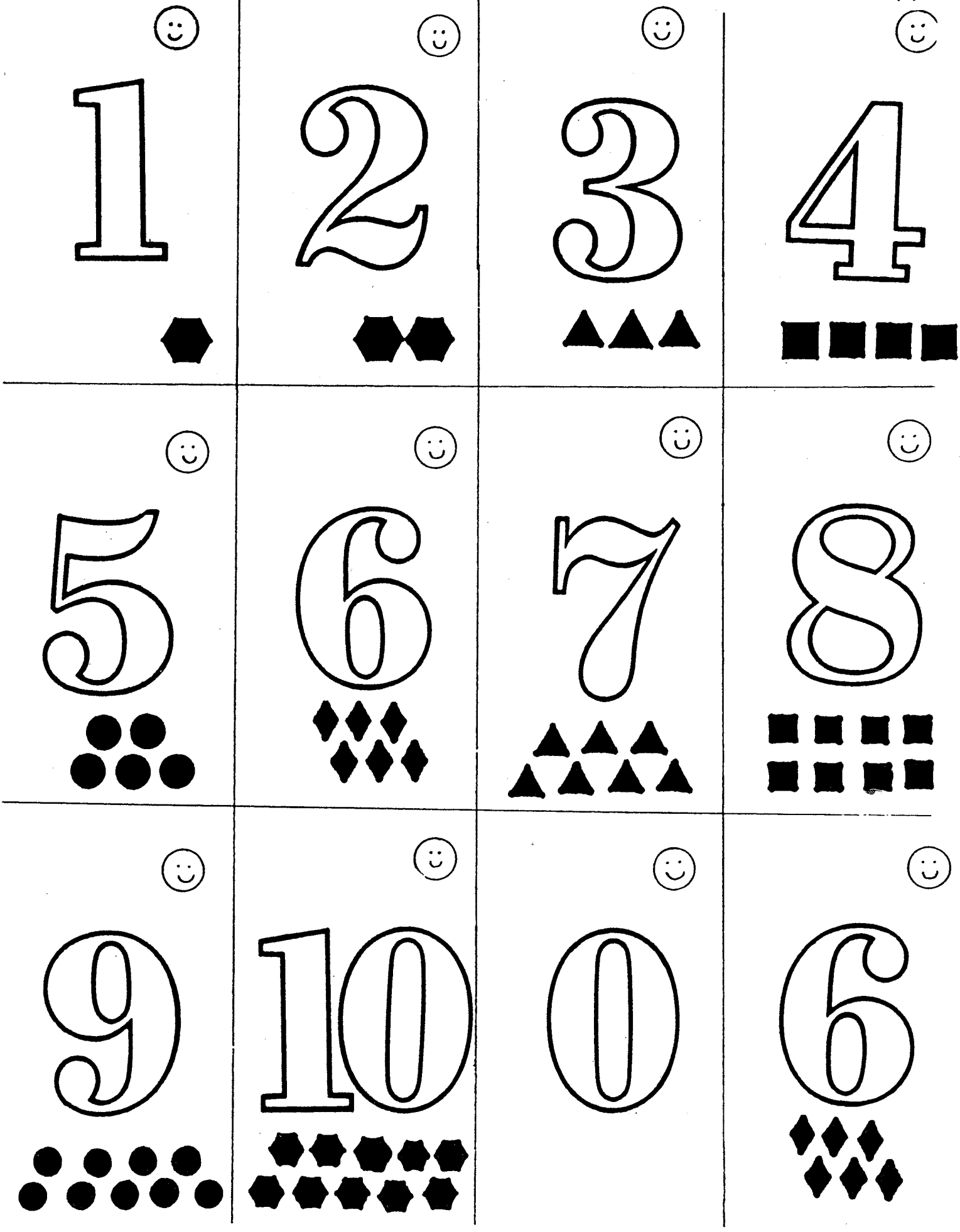


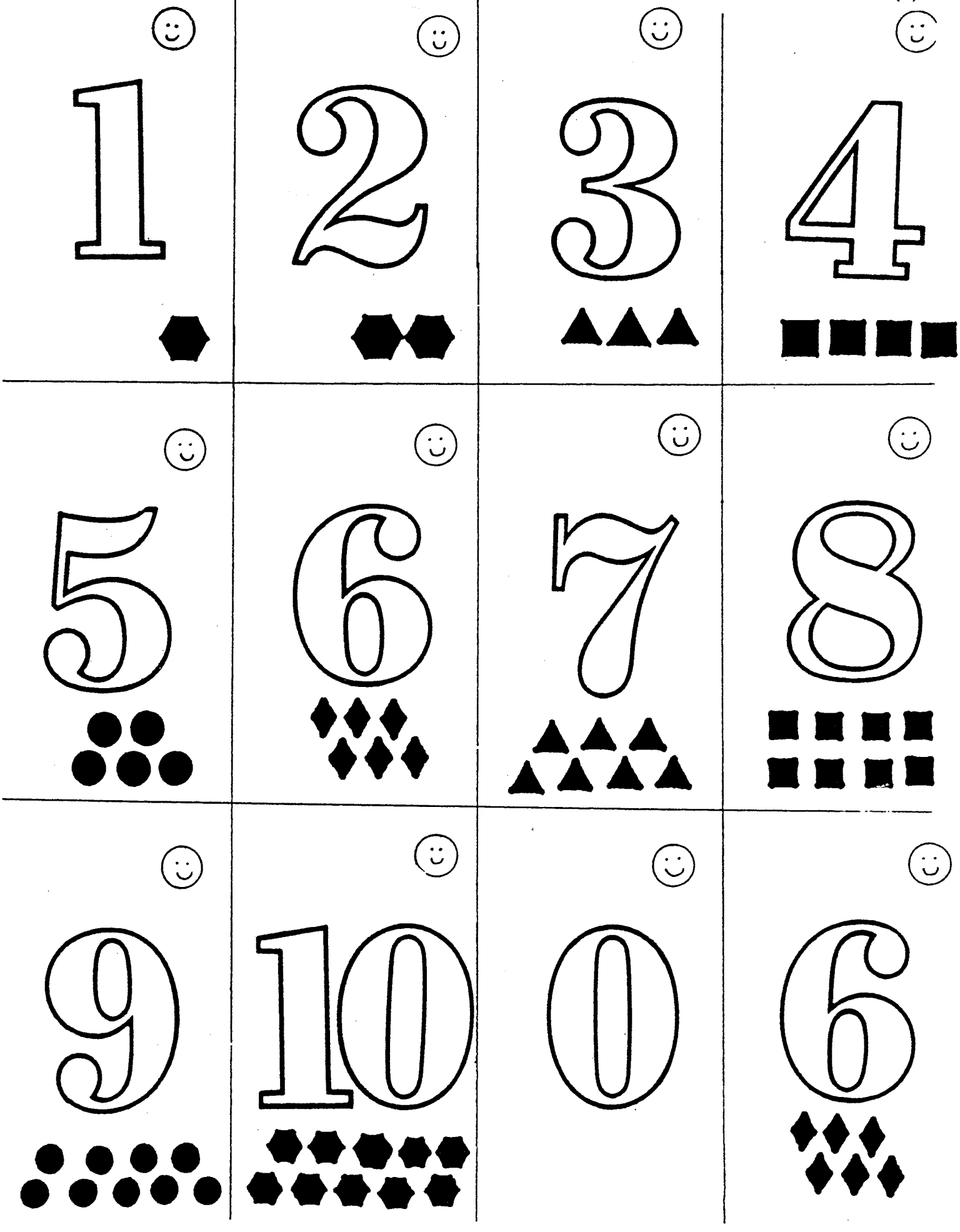
Gameboards (4)

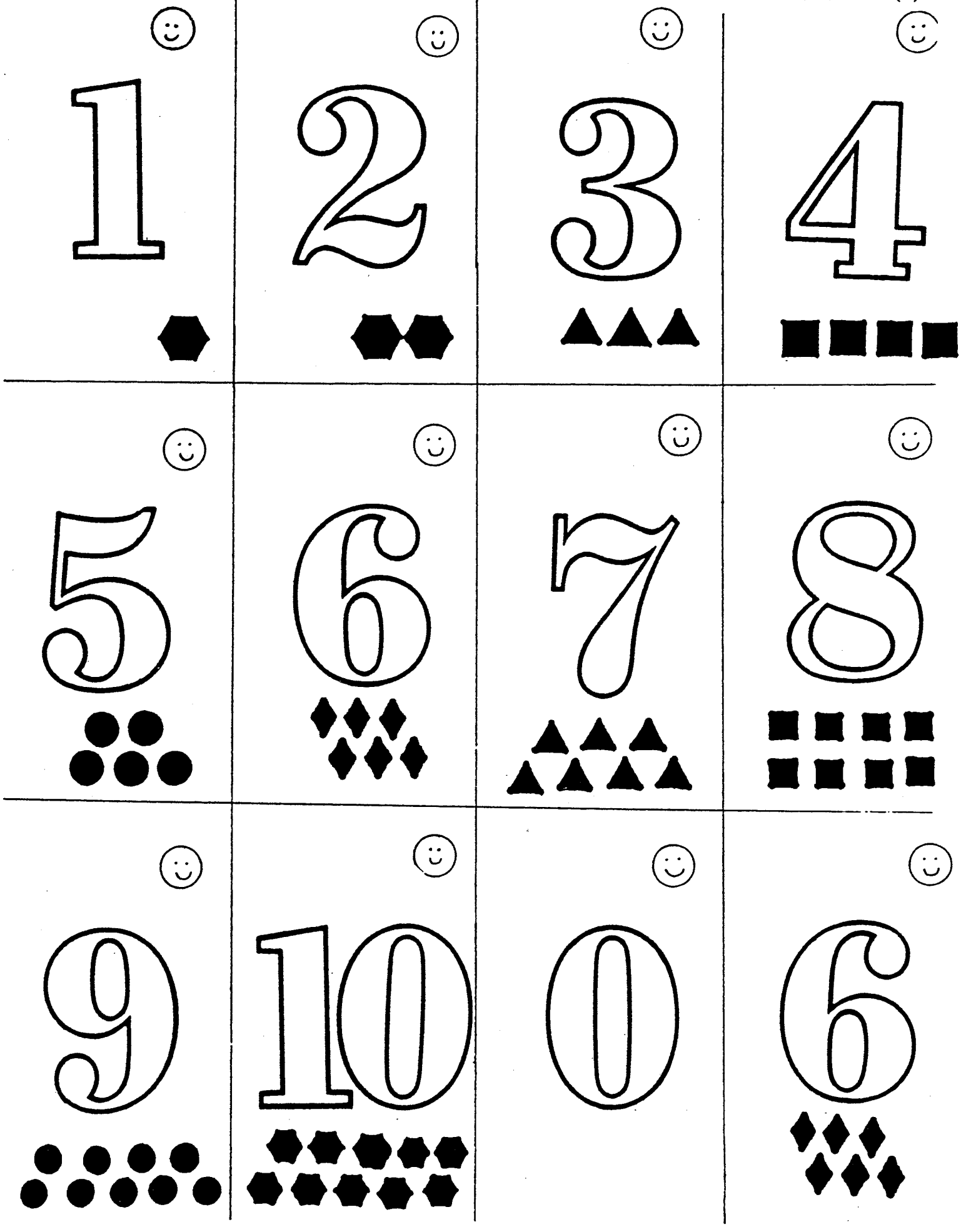


Gameboards (4)



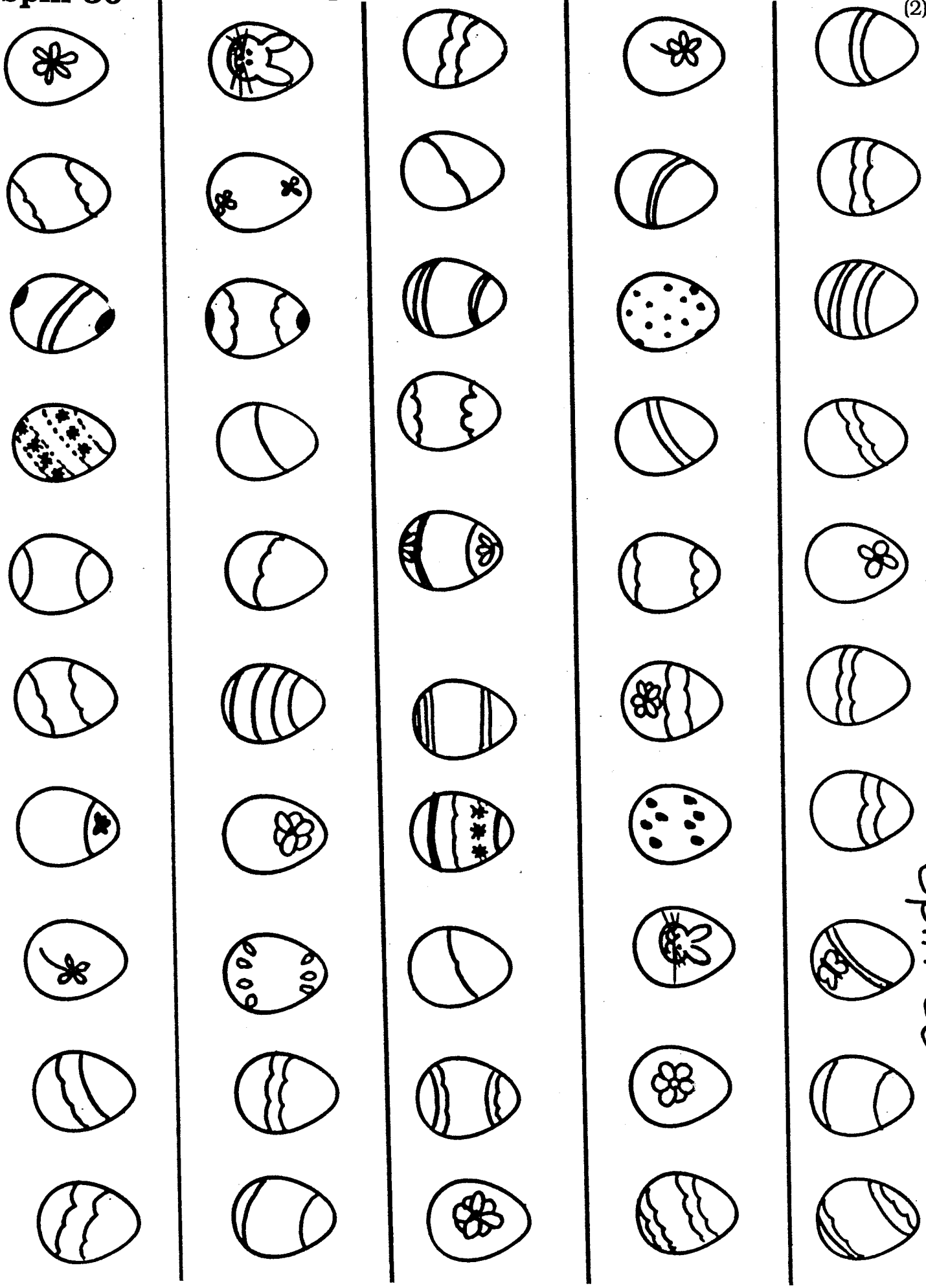

1
2
3
4
5
6
7
8
9
10
0
6


1
2
3
4
5
6
7
8
9
10
0
6


1
2
3
4
5
6
7
8
9
10
0
6

Spin 50

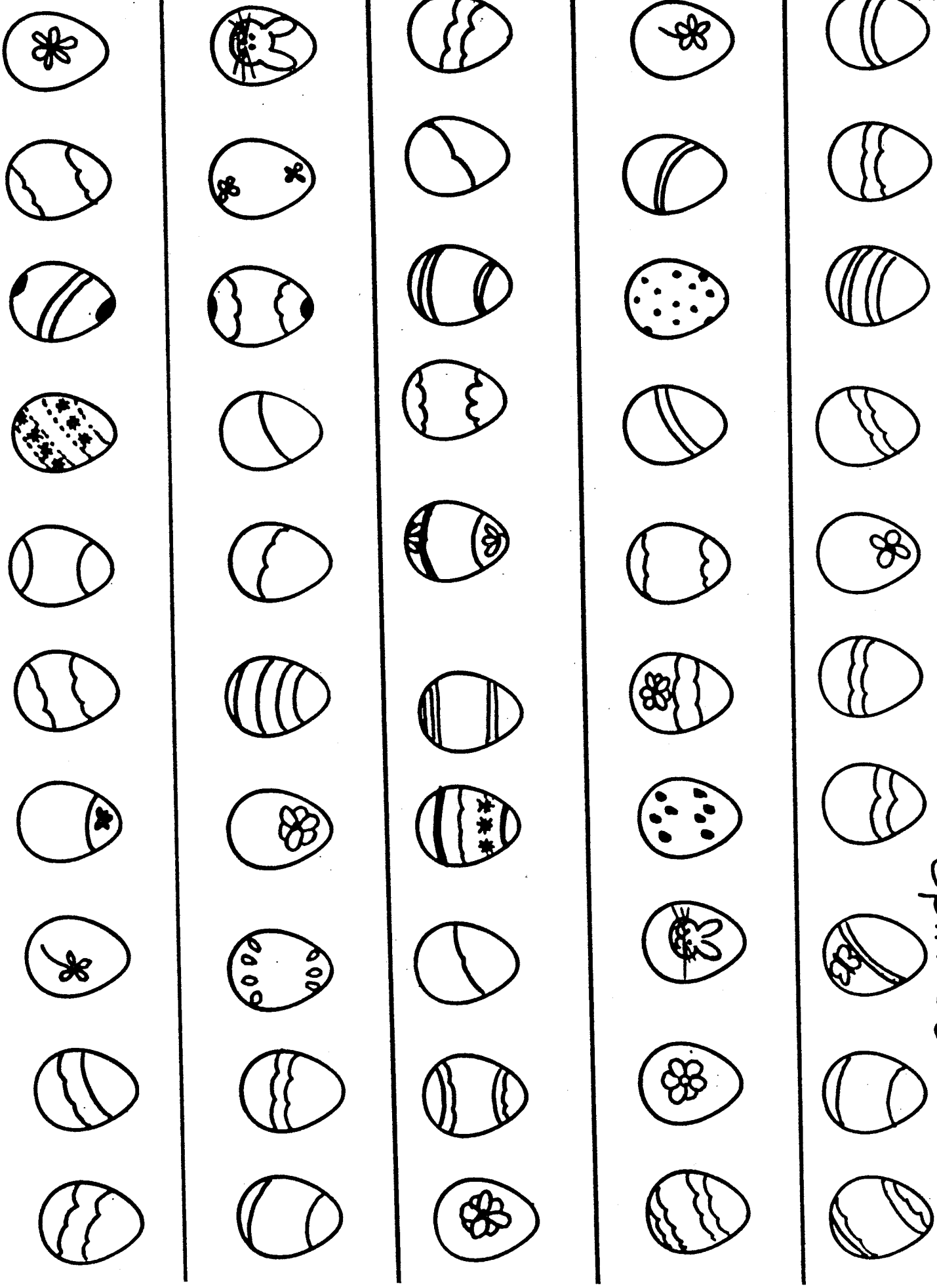
(make 2 copies)



Spin 50

Spin 50

(make 2 copies)



Spin 50

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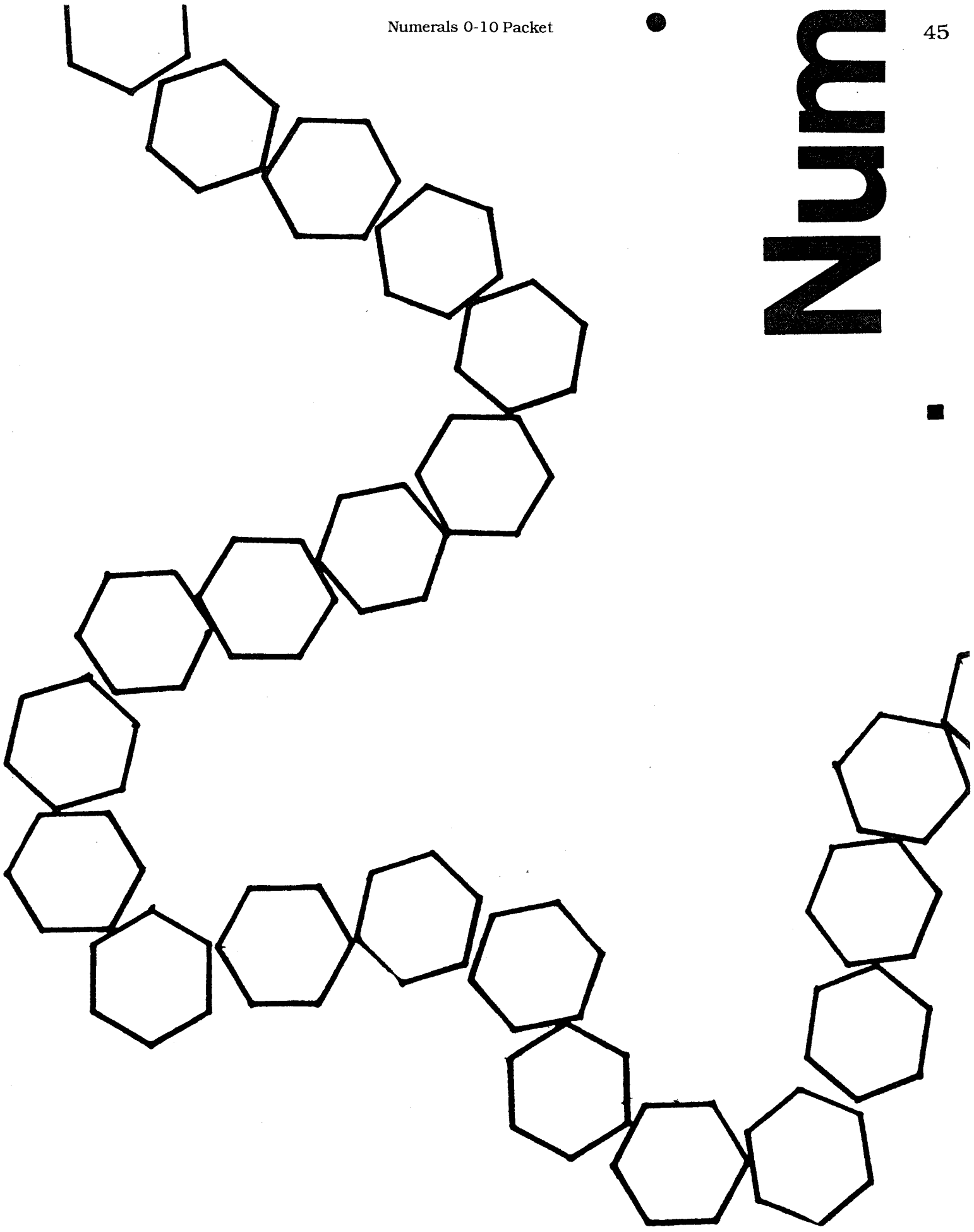

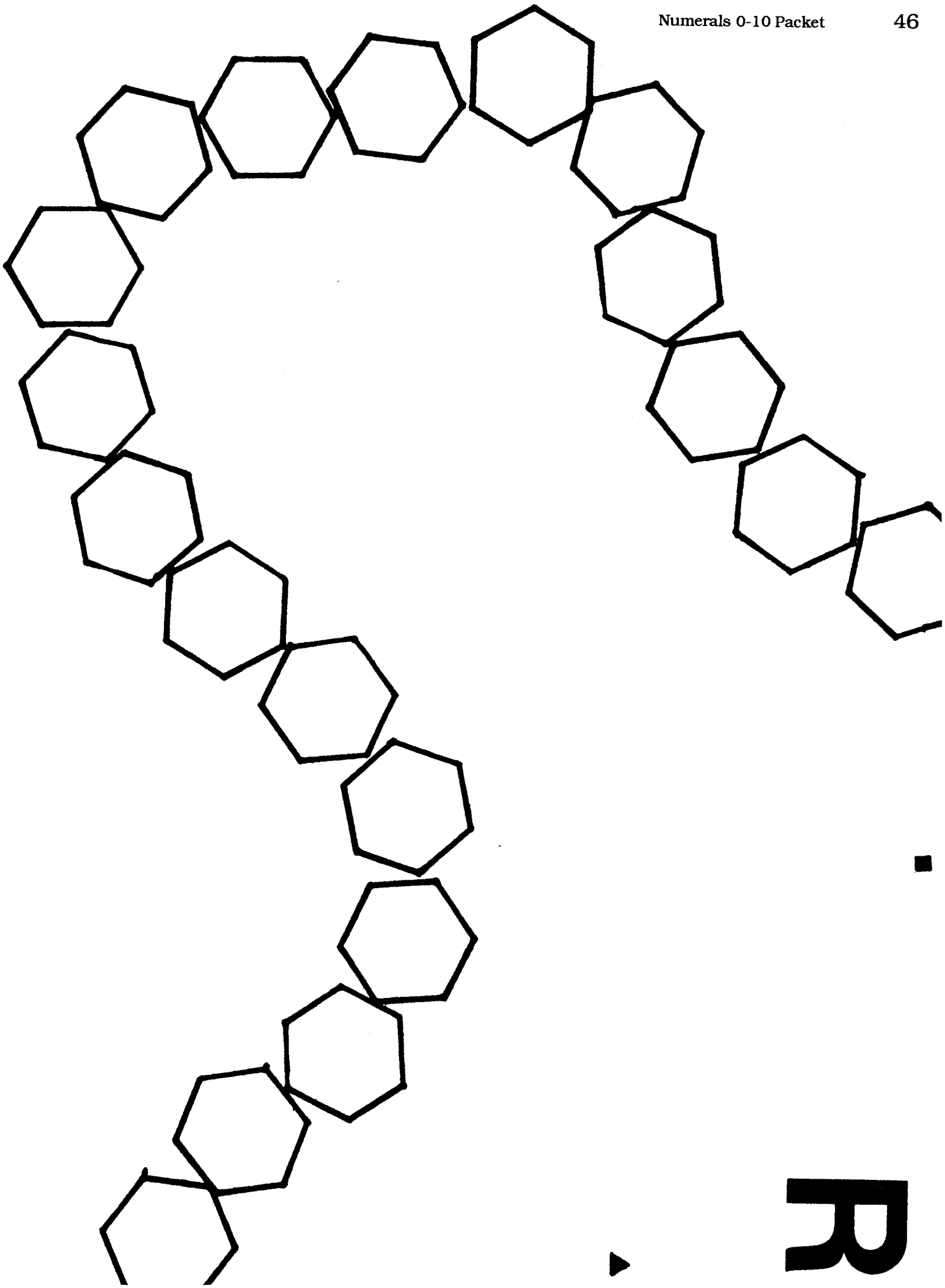

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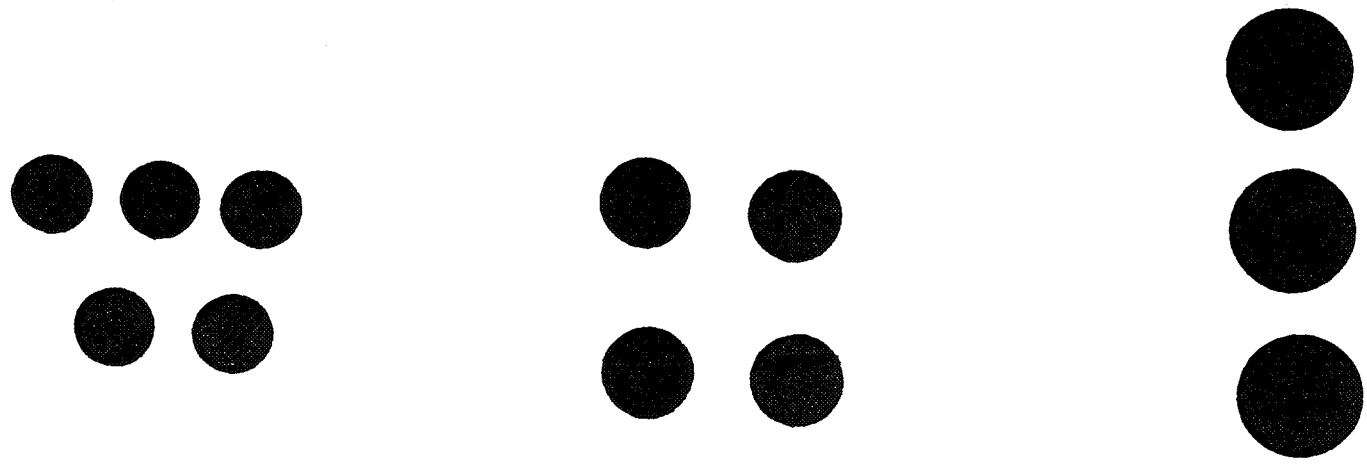
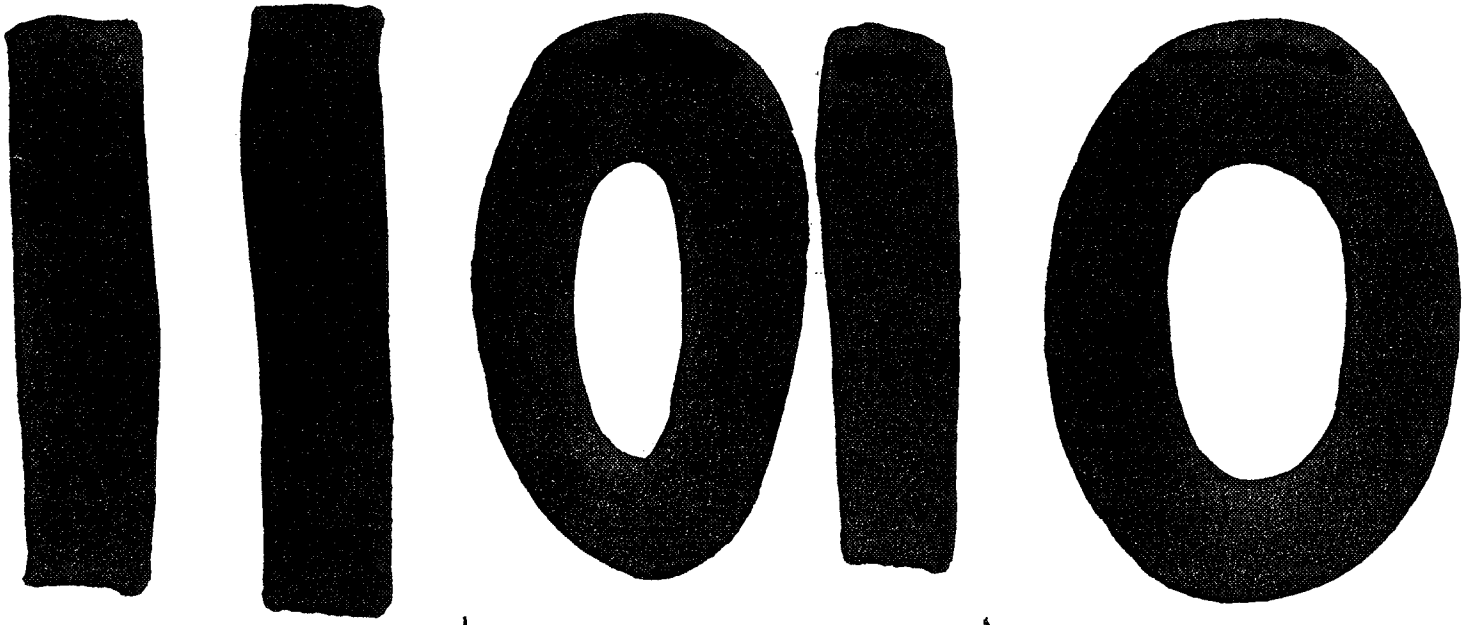
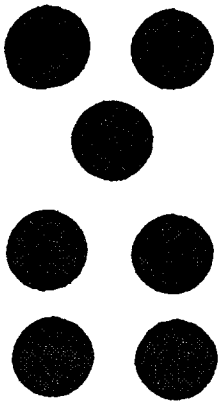
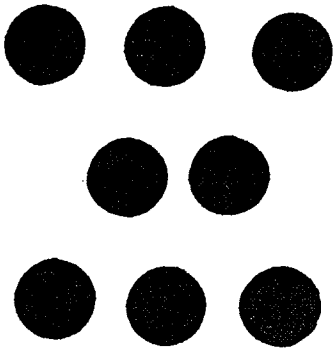
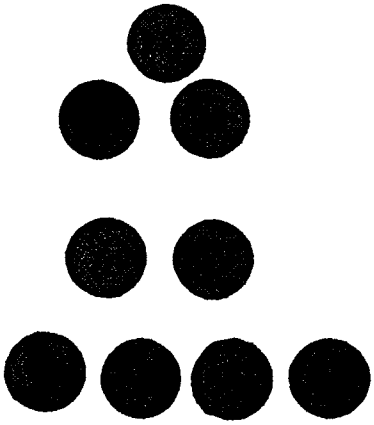


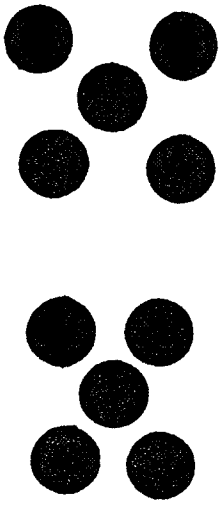


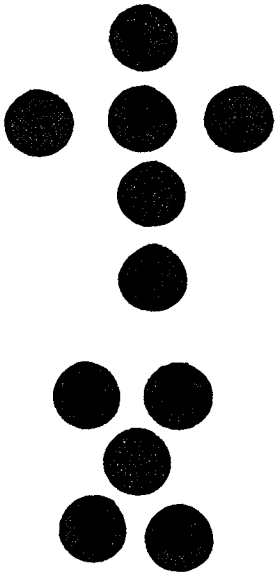
Crazy Crocodile











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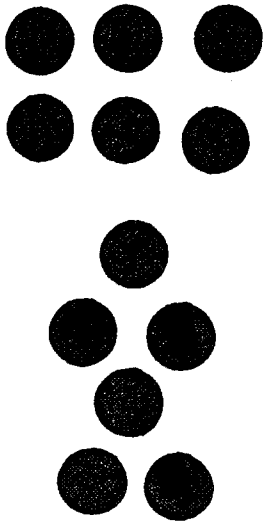


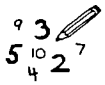
Apply the appropriate labels on both ends of each box lid. Either run the labels on full-sheet Avery Labels No. 5165, cut apart and attach; or simply cut apart these pages and glue or tape on.

Spinner Counting

A PRACTICE & ENRICHMENT BOX

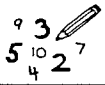
Spin, Count, and Make a Book

A PRACTICE & ENRICHMENT BOX



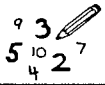
Jump and Count

A PRACTICE & ENRICHMENT BOX



Bounce and Count

A PRACTICE & ENRICHMENT BOX



Toss and Count

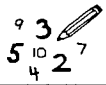
A PRACTICE & ENRICHMENT BOX

Grand Prix

A PRACTICE & ENRICHMENT BOX

Top Draw

A PRACTICE & ENRICHMENT BOX

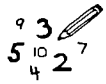


Gift Wrap Counting

A PRACTICE & ENRICHMENT BOX

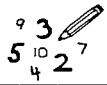
Spin 50

A PRACTICE & ENRICHMENT BOX



Spinners and Scissors

A PRACTICE & ENRICHMENT BOX

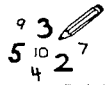


Rub Over Numerals

A PRACTICE & ENRICHMENT BOX

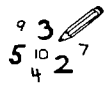
Counting Books
commercial

A PRACTICE & ENRICHMENT BOX



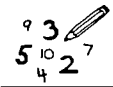
Counting Books
student made

A PRACTICE & ENRICHMENT BOX



Feely Numbers in Order

A PRACTICE & ENRICHMENT BOX



Spinner Counting

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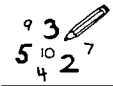
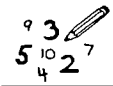


Spin, Count, and Make a Book

A PRACTICE & ENRICHMENT BOX



Jump and Count

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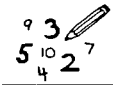

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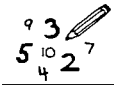

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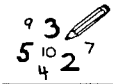

Grand Prix

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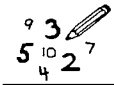
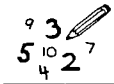


Top Draw

A PRACTICE & ENRICHMENT BOX



Gift Wrap Counting

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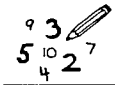

Spin 50

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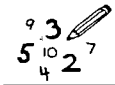

Spinners and Scissors

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Rub Over Numerals

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Counting Books
commercial

A PRACTICE & ENRICHMENT BOX

Counting Books
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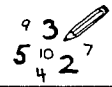
A PRACTICE & ENRICHMENT BOX

Feely Numbers in Order

A PRACTICE & ENRICHMENT BOX

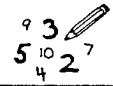
Numerals Floor Graph

A PRACTICE & ENRICHMENT BOX



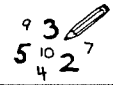
Number Race

A PRACTICE & ENRICHMENT BOX



Green Beans

A PRACTICE & ENRICHMENT BOX



Crazy Crocodile

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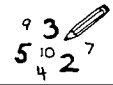
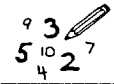


Counting Jars

A PRACTICE & ENRICHMENT BOX

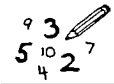
Newspaper Numerals

A PRACTICE & ENRICHMENT BOX



Cooky Cutter Numerals

A PRACTICE & ENRICHMENT BOX



Feely Box Three in a Row

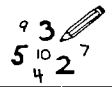
A PRACTICE & ENRICHMENT BOX

Numerals Floor Mat

A PRACTICE & ENRICHMENT BOX

Numerals Floor Graph

A PRACTICE & ENRICHMENT BOX



Number Race

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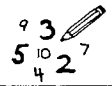

Green Beans

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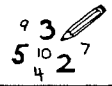

Crazy Crocodile

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Cooky Cutter Numerals

A PRACTICE & ENRICHMENT BOX

Feely Box Three in a Row

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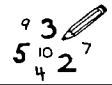

Numerals Floor Mat

A PRACTICE & ENRICHMENT BOX

Pattern

BOX IT OR BAG IT MATHEMATICS

Practice & Enrichment Boxes

Donna Burk • Allyn Snider
Paula Symonds

Published by The Math Learning Center

Box It or Bag It Mathematics, Practice & Enrichment Box: Pattern

Box It or Bag It Mathematics consists of:
- Teachers Resource Guide and Blackline Masters, Kindergarten
- Teachers Resource Guide and Blackline Masters, 1st and 2nd Grade
- Practice & Enrichment Boxes:
  - Shapes
  - Introduction to Measuring
  - Understanding Measuring
  - Reading, Writing & Understanding Numerals 0–10
  - Pattern
  - Arithmetic
  - Money
  - Place Value Counting
  - Place Value Addition & Subtraction

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Pattern

Practice and Enrichment Boxes

Getting Started

Once you've introduced Pattern through a variety of group lessons, (be sure to see Box It or Bag It Mathematics Teachers Resource Guide, *PATTERN), you will want children to practice and extend their understanding using the activities in this packet. Here are a few things we've found helpful for a successful Independent Practice Time.*

Provide no more than 8–12 boxed activities at one time for a class of 30. Too many activities create more than tolerable chaos. Each Box is designed to be used by 1–4 children.

Model each activity thoroughly until children can tell you what to do, step by step. You'll find "box ingredients" and "playing instructions" for each activity in this packet. We use clear Contact paper to put them in our box lids so WE can remember what goes in each Box and how each game is played! Reading the directions would be too difficult for most primary children.

Resist the temptation to put out all your challenging Boxes at once—provide a balance of easy and hard. (If you set out too many difficult Boxes, all the children will need you at once and the noise level will be almost unbearable as your children try to cope with the stress of too many difficult tasks.)

As you construct these Practice and Enrichment Boxes, cover your box tops with the same design contact paper. That way, you'll be able to pull your Pattern Boxes off the shelf easily, even if they've gotten mixed in with other boxes. (Boxes can be ordered from The Math Learning Center in four sizes: standard (9 X 12 X 2), half size (9 X 6 X 1-7/8), junk (4 X 7 X 1-1/8), and mini (3-1/2 X 4 X 1-1/8). See the Box It or Bag It Mathematics Teachers Resource Guide, *MATERIALS INDEX, for additional ordering and making information.*

Remember the Boxes themselves can be used for group instruction. They are ideal for use by an aide or parent with small groups. Some of them can be easily adapted for use with your whole group.

During Independent Practice Time, it's critical that you be available *and* in circulation *to make sure things go smoothly. Once routines even out, you'll have opportunities to observe individuals which are not afforded when you conduct group instruction. You can spot children with problems and see children with understandings beyond your predictions. See the next page for some Observation guidelines.*

Be sure to see the Box It or Bag It Mathematics Teachers Resource Guide, *INTRODUCTION, for more implementation strategies.*

Pattern Observation Sheet

																Children's Names
																Recognizes patterns
																Copies patterns
																Extends patterns
																Verbalizes patterns in a variety of ways
																Patterns by attributes other than color (size, shape, texture, position)
																Creates simple patterns (2 elements)
																Creates complex patterns (3 or more elements)
																Translates auditory or visual patterns to math materials
																Works cooperatively
																Shares materials
																Helps others

Playdough Patterns (1–4 children)

Box ingredients→

four children's rolling pins or 6-inch lengths of 1" doweling

homemade playdough (recipe follows) divided and stored in four airtight containers

6–12 small cookie cutters

four plastic placemats (store these on classroom tools shelf)

standard box for storage

PLAYING INSTRUCTIONS

1. Choose two or three cookie cutters.
2. Roll out playdough.
3. Cut "cookies" using chosen cutters.
4. Arrange your cookies in a pattern on your placemat.
5. Show your completed work to a friend and tell them about your pattern.

MAKING INSTRUCTIONS

Recipe for Homemade Playdough

Thoroughly mix these dry ingredients:
- 2 cups white flour
- 1 cup salt
- 1 tablespoon powdered alum (available in spice section of most grocery stores)

Boil:
- 2 cups water
- 2 tablespoons salad oil
- food coloring
- (Lemon or other flavor extract is nice—add it just before pouring water into flour mixture)

Pour boiling water over flour mixture. Stir until well mixed. (Ignore lumps.) Let it cool until easy to handle. Knead a few minutes until smooth and elastic. Let it cool until room temperature (otherwise it gets sticky). Seal into airtight containers.

Unifix Cubes Patterns (1–4 children)

Box ingredients→

starter cards

tub of unifix cubes

half box for storage

PLAYING INSTRUCTIONS

1. Choose a starter card.
2. Can you copy the pattern?
3. Can you make it even longer?
4. Can you invent some patterns of your own?

MAKING INSTRUCTIONS

Starter Cards

1. Color simple patterns on starter cards. Be sure colors match your cubes.
2. Laminate cards and cut apart.

Alphabet Stamps (1–4 children)

Box ingredients→ rubber alphabet stamps in half box

ink pads

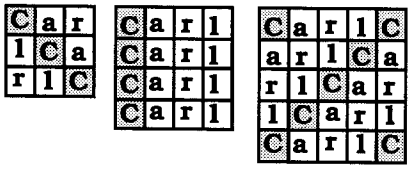
4 X 18 newsprint strips

1"-square graph paper cut into 3 X 3, 4 X 5, 5 X 5, and 6 X 6 grids

standard box for storage

PLAYING INSTRUCTIONS

1. Choose two or more stamps and stamp out an alphabet pattern.
2. Use stamps to create a word or two. Stamp your word pattern over and over.
3. Stamp your name over and over on newsprint strips or graph paper grids. It's fun to stamp your first name on a grid, leaving no spaces, and to color the first letter, as illustrated below.



MAKING INSTRUCTIONS

Alphabet Stamps

If you plan to provide a full set of these, it works best to set them up in a divided box (glue in cardboard sections with a glue gun) in alphabetical order with each letter labeled in bottom of box.

Ink Pads

Buy these in any stationery store—they even come in various colors. Replacement ink comes in roll-on bottles so the pads can last for years. Your school may even have them available.

Tile Patterns (1–4 children)

Box ingredients→ tub of 1"-square ceramic tiles

starter cards in half box

PLAYING INSTRUCTIONS

1. Select a starter card.
2. With tiles, copy the pattern on the card and extend it.
3. Can you invent tile patterns of your own?

NOTE: You may wish to have children occasionally record these patterns. Cut construction paper squares the size of your tiles. Children paste onto construction paper strips.

MAKING INSTRUCTIONS

Starter Cards

Locate in cardstock portion of packet. Color to match your tiles. Laminate and cut apart. Store in half box to be set out in tile container.

Coin Patterns (1–4 children)

Box ingredients→ junk box or mini box of real coins

silver and brown crayons

starter cards

coin stamps and ink pad

newsprint strips

standard box for storage

PLAYING INSTRUCTIONS

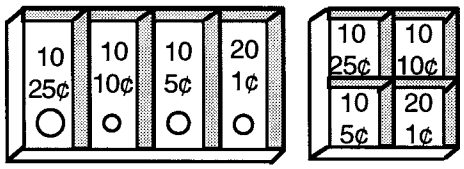
1. Choose a starter card or use your own idea.
2. Lay out a pattern of real money.
3. Stamp out your pattern on a newsprint strip.
4. Color and label your pattern.

Sometimes older children who are very good at counting money like to count up how much they've used in their patterns. You'll need to model this.

MAKING INSTRUCTIONS

Junk Box of Coins

1. Cut cardboard strips to create dividers inside your box. Glue the dividers in with tacky glue or a glue gun.
2. Use coin stamps to label each section and also write in bottom of box how many of each coin per section. (We choose "bankers" to check each box for correct amounts at the end of each work session.)



Coin Stamps

These can be purchased from The Math Learning Center. One or two sets will be plenty.

Newsprint Strips

Cut 12 X 18 newsprint into 4 X 18 strips to record pattern. Keep a generous supply of these in a box or basket on your classroom tools shelf; that way they won't get crunched and you don't have to worry about frequent refills.

Starter Cards

Locate in cardstock portion of the packet, color, laminate and cut apart. Make a tagboard pocket to hold cards.

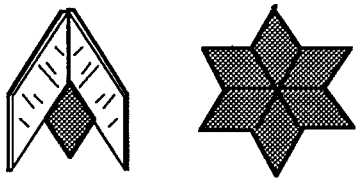
Pattern Blocks and Mirrors (1–4 children)

Box ingredients→ tub of pattern blocks

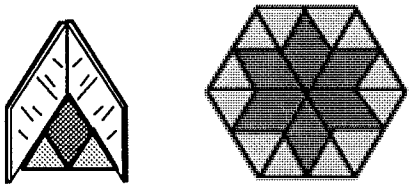
four hinged mirrors in a junk box (This Pattern box is to be placed in a tub of pattern blocks.)

PLAYING INSTRUCTIONS

1. Set out one pattern block, any shape.
2. Close a hinged mirror around the block until the block fits snugly into the corner.
3. Build what you see in the mirror beside your mirror.



4. Add another block or two. Don't move the mirror. Build what you see now.

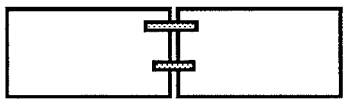


5. Continue to add new blocks into the design, one or two at a time, and build the resulting reflection.

MAKING INSTRUCTIONS

Mirror

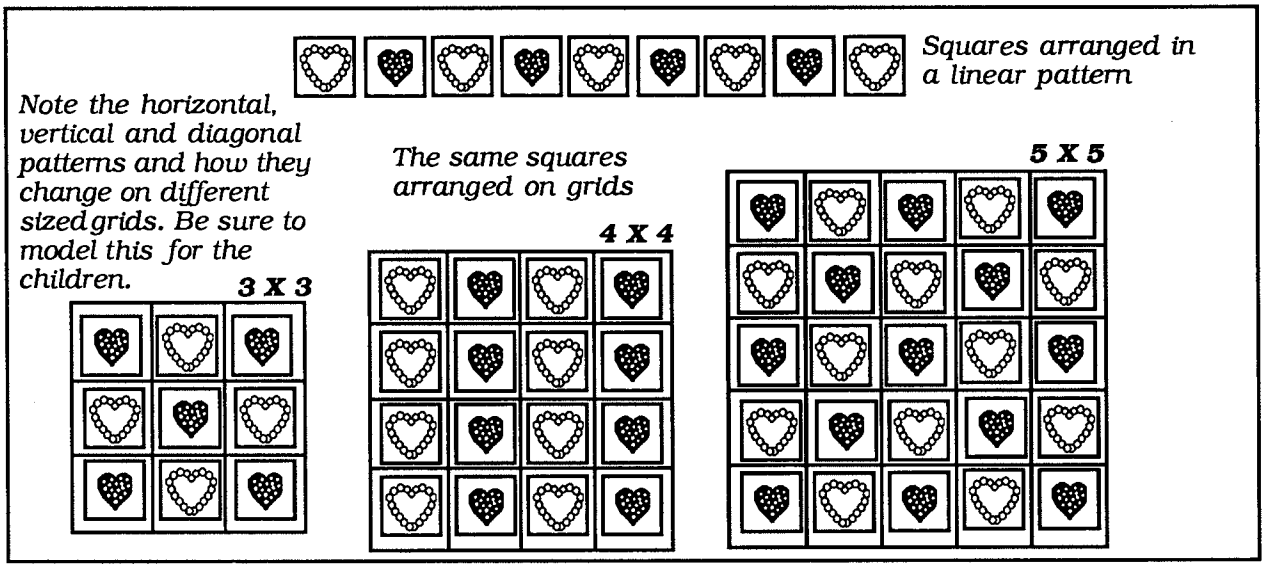
Hinge two small mirrors (available from The Math Learning Center) at the back with two pieces of strapping tape, leaving about 1/4" between them. Make four of these hinged mirrors.



Sticker Patterns (1–4 children)

Box ingredients→ sticker cards mini boxes to hold each set

mats for layout standard box for storage



PLAYING INSTRUCTIONS

1. Choose a box of sticker cards.
2. Sort your cards so you know what you have for your pattern.
3. Plan your pattern and set it up in a line.
4. What happens when you set it up on one of the grids? Is it the same on every mat?

MAKING INSTRUCTIONS

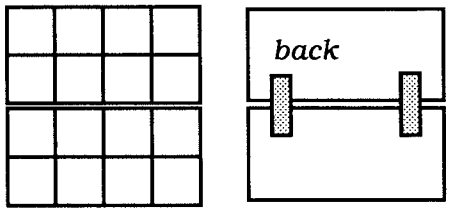
Sticker Cards

Purchase packages of stickers and mount them on sheets of 10 X 12 board which you've marked with 2 X 2 squares. You'll need about 20 of each kind of sticker. Each set should have two, three or four kinds; for example, one set might have 20 smiling jack-o-lanterns and 20 frowning jack-o-lanterns; another set might have 20 red hearts, 20 frilly hearts and 20 checkered hearts. The more variables the set has, the more challenging it will be to use. You'll want two or three different sets. Laminate and cut apart. It's smart to have each set on a different color of poster board so it's easier to clean up properly.

Box these sets in mini boxes inside a standard box.

Mats

Make two 3 X 3, 4 X 4 and 5 X 5 grids from tagboard and draw a grid to fit the size of your sticker cards.



Clock Patterns (1–2 children)

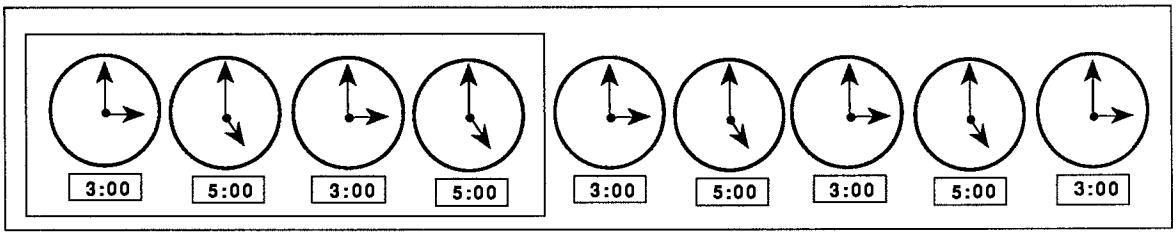
Box ingredients→ 8–10 small clocks starter cards

standard box for storage

Optional:

rubber clock stamp and ink pad

newsprint strips



PLAYING INSTRUCTIONS

1. Choose a starter card.
2. Read the time shown on each clock face on the card.
3. Use some small clocks to keep the pattern growing (see illustration above).

Optional:

4. Use the clock stamp to stamp the pattern on newsprint strip.
5. Draw in the hands on each clock and write the time on your record strip.

MAKING INSTRUCTIONS

Starter Cards

Locate in cardstock portion of packet. Laminate and cut apart. Make a tagboard pocket to hold cards.

Clock Stamp

These are available from The Math Learning Center if you don't already have some at your school.

Small Clocks

Check to see if your school has available a kit of little wooden clocks. Otherwise construct some of your own from poster board and brass fasteners.

Newsprint Strips

Cut 12 X 18 newsprint into 4 X 18 strips. Keep extras in a box or basket on your classroom tools shelf; that way they won't get crunched.

Calendar Patterns (1–4 children; first and second grade)

Box ingredients→ calendar grids (2) Days of week cards (2 sets)

Month cards (2 sets)

record sheets templates

ziplock bags or mini boxes of calendar shapes

standard calendar for current year

standard box for storage

PLAYING INSTRUCTIONS

1. Lay out the calendar grid.
2. Set out the name of the month you've chosen.
3. Set out the days of the week.
4. Decide which calendar pieces you want to use in your pattern. Set those out in the pattern space.
5. Look at this year's calendar. Find out what day was the first day of your month. Begin setting out your calendar pattern on that day.
6. How many days are in your month? Be sure to end your pattern on the correct day.
7. Show your teacher your hard work.

Optional: (making a record to take home)

1. Leave your calendar all set up.
2. Find the template to match your pattern.
3. Get a blank calendar paper to record your pattern.
4. Use the template to draw your pattern.
5. Can you write the numbers on your calendar?
6. Show your teacher your very hard work.

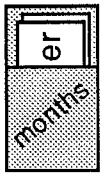
MAKING INSTRUCTIONS

Calendar Grid

Locate in cardstock portion of packet. Laminate or contact for durability. Hinge together with tape on back side so it will fold to fit into your box.

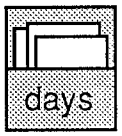
Month Names

Cut 12 strips of 2 X 10 poster board for month names. Laminate. Place in tagboard pocket. Make two sets.



Days of Week Cards

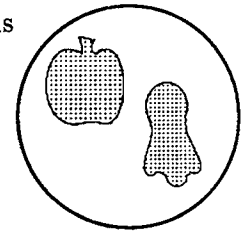
Cut 2 X 2 squares of poster board for day names. Place in tagboard pocket. Make two sets.



Pattern Pieces

1. Locate colored Calendar Pattern sheets for pattern shapes and cut out the shapes.
2. Put each set in a ziplock bag or mini box.

Templates



Cut templates in *clear* lids from Cool Whip, large margarine tubs, large coffee cans, etc. (see blacklines for patterns). Cut all shapes for a set in one lid with small scissors. If you trim the edges off the lids so they set flat on both sides, these templates will be easier for children to use and fit into your box more easily.

Record Sheets

Locate in blacklines and run ditto copies. Hinge on black with two pieces of scotch tape.

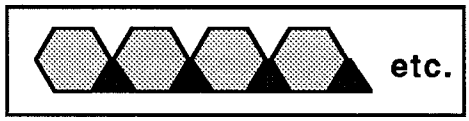
Pattern Blocks (1–4 children)

Box ingredients→ starter cards (stored in half box covered with your Contact paper for Pattern boxes)

tub of pattern blocks

PLAYING INSTRUCTIONS

1. Choose a starter card.



2. Build the pattern, repeating it over and over. (It is fun to have your pattern stand up like a wall or fence.)

3. Can you invent some patterns of your own?

MAKING INSTRUCTIONS

Starter Cards

1. Locate the two sheets of Pattern Block starter cards in cardstock portion of the packet. Color to match your pattern blocks. Laminate and store in half box. Cards will be used with tub of pattern blocks.

Template Patterns (1–4 children)

Box ingredients→ plastic templates

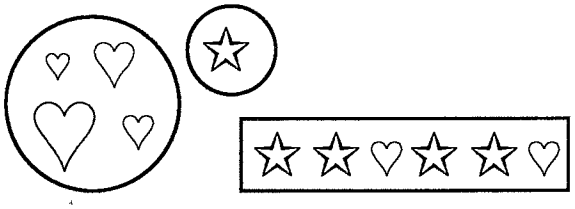
crayon and pencils

newsprint strips

half for for storage

PLAYING INSTRUCTIONS

1. Choose the templates you want to use.
2. Plan and draw your pattern using the templates on newsprint strips.
3. Color your pattern if you want.
4. Tell a friend about your work.



MAKING INSTRUCTIONS

Templates

Locate blackline page for template ideas. We like to offer some templates with one item in several sizes, all cut into one template. (Cool Whip size lids work well as long as children can see through lid.) We also use small margarine lids for single items. Small scissors work well for cutting these.

Be sure to trim the edges off the lids to make them easier for children to use.

Newsprint Strips

Cut 12 X 18 newsprint into 4 X 18 strips. Keep these in a box or basket on your classroom tools shelf.

NOTE: Some of you may already have commercial stencils or templates which would work well here so you wouldn't need to cut more for this activity.

Rubber Stamp Patterns (1–4 children)

Box ingredients→ assorted rubber stamps (six are enough to start with—you can add to your collection over the years)

ink pads

rubber stamp grids

4 X 18 newsprint strips (store on classroom tools shelf)

PLAYING INSTRUCTIONS

1. Choose your favorite stamps.
2. Plan a pattern.
3. Stamp your pattern on a strip.
4. Tell someone about your pattern.
5. Can you stamp your pattern on a grid? What do you see?

MAKING INSTRUCTIONS

Newsprint Strips
Cut 4 X 18 strips. Keep these in a box or basket on your classroom tools shelf.

Rubber Stamp Grids
Make a grid master by dividing an 8-1/2 X 11 sheet of paper into 16 sections. Include a place for the student's name. Run copies to place in your box.

Geoboards, Nuts and Washers (1–4 children)

Box ingredients→ junk box of nuts and washers

four geoboards in tub or storage container

PLAYING INSTRUCTIONS

1. Get a geoboard and box of nuts and washers to share with other workers.
2. Plan a pattern. Think about how it will go onto your geoboard.
3. Build your pattern.

NOTE: Some children build just the top and bottom row, others build around the outside, others build all rows. The pattern variations are endless here so take lots of time to model multiple patterning possibilities with your class, looking at the boards for horizontal, vertical and diagonal patterns.

MAKING INSTRUCTIONS

Nuts and Washers
Cover a junk box with the contact paper of your pattern boxes. Make elastic tie-down. Fill with nuts and washers (the children could bring these). Place junk box in larger container with geoboards.

Mirror Patterns (1–4 children)

Box ingredients→ mirror cards
two hinged mirrors
two single mirrors
junk box for storage

PLAYING INSTRUCTIONS

1. Choose a card and mirror.
2. Fool around with your mirror on the card. What do you see? What happens when you move the mirror? Is it different with a single mirror than a hinged mirror?
3. Show a friend your wonderful discoveries.

MAKING INSTRUCTIONS

Mirrors
Order these from The Math Learning Center. They are easily assembled with scotch tape.

The hinged mirrors are taped on the back side (two mirrors together). Children love opening and closing them for a variety of outcomes with cards.

Mirror Cards
Locate in cardstock portion of packet. Laminate and cut apart.

NOTE: The symmetry children discover here is an element of pattern.

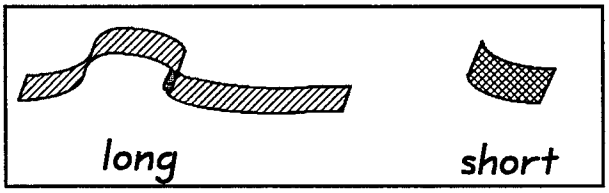
Feely Box Patterns (1–4 children)

> See *Box It or Bag It Mathematics Teachers Resource Guide*, PATTERN, for group lesson.

Box ingredients→ two Feely boxes of common items
idea cards
half box for storage

PLAYING INSTRUCTIONS

1. Get a partner or two.
2. Each person needs a Feely box.
3. Choose an Idea card.



4. Reach into Feely boxes to create the pattern. Tell one another what you're adding as the pattern grows.

NOTE: Children can do this activity alone if they prefer.

MAKING INSTRUCTIONS

Feely Boxes
Use tuna or cat food cans. If there are any rough edges on the rim, use a hammer to smooth them. Use a child's stretchy sock to go over each can.

Common Items
If you have a collection of junk boxes, take 30 or more items from them to fill your Feely boxes—items such as shells, buttons, screws, washers, bolts, plastic lids, fruit pits, bread fasteners, keys.

Idea Cards
Locate cards in cardstock portion of packet. Laminate and cut apart. Place in tag pocket.

Pattern Shapes Race (2–4 children)

Box ingredients→ gameboard, pattern cards, game markers, standard box for storage, Risk cards (for first and second graders)

PLAYING INSTRUCTIONS

1. Set out gameboard. Place pattern cards (mixed with Risk cards for first and second graders) in a pile, face down.
2. Choose a marker.
3. Take turns selecting a pattern card. Work together to decide what comes next in the pattern.
4. If your pattern card says:

you'd move your marker to the next available circle on the gameboard.

5. The first person to reach the winner post wins!

MAKING INSTRUCTIONS

Gameboard

Locate in the cardstock section of the packet. Color if desired—not necessary. Laminate and hinge with tape on the backside so it can fold to fit into box.

Cards

Locate in the cardstock section of the packet. Laminate and cut apart. Kindergarten teachers will probably not need the Risk cards.

Quilt Patterns (1–4 children)

Box ingredients→ quilt block mats, quilt pieces, crayons, quilt block record sheets, standard box for storage

PLAYING INSTRUCTIONS

1. Choose a quilt block you would like to make.
2. Choose a group of fabrics for your quilt block.
3. Use the space below your quilt block to plan where your colors will go. Set up one different triangle on each square in the planning space to help you remember how you will complete your block.
4. Compete your block. Show a friend your very hard work.
5. Choose a copy of the block you're working on to help you make a record of your quilt block. (Select crayons in a color scheme similar to what you've built.)

MAKING INSTRUCTIONS

NOTE: This sounds like tons of work. It isn't as bad as it sounds and the activity is wonderful for many children. We're convinced it is worth the effort. Children experience design, symmetry, fractional parts and geometry when making quilt blocks.

Fabric Triangles

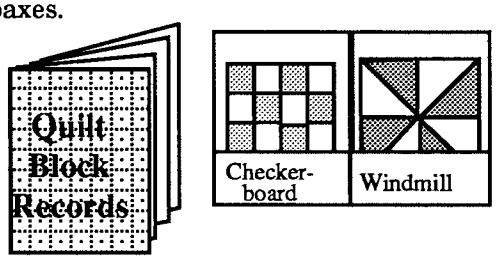
1. Buy two to three yards of Stitch Witchery at any fabric store. Ask your children to bring in leftover cotton fabric, especially the kind that has tiny designs (calico types), pin dots, and solid colors.

2. Cut your Stitch Witchery and fabric into 9" squares. This allows for error.
3. Cut white poster board into 9" squares.
4. Make poster board, Stitch Witchery, fabric sandwich.
5. Iron with a steam iron (we found we didn't need a damp cloth) to make fabric adhere to board. (Follow manufacturer's direction—comes with Stitch Witchery—except for damp cloth.)
6. Using a paper cutter, trim ironed blocks to size indicated on fabric cutting guide (see blacklines). Now cut with paper cutter into squares and then triangles. (We ran ditto copies of the cutting guide and lightly glued them on the back side of the poster board. Cutting was very quick that way.)
7. We put complementary fabric colors together in ziplock bags or junk boxes in our game box to help children in choosing fabrics.

NOTE: Contact paper has become available in fabric. If you could share the cost of several rolls with a few friends, it would be easy to cut your triangles from squares of Contact paper adhered to poster board. Even regular Contact paper would work.

Quilt Blocks Mats
Locate in cardstock portion of packet. Do not laminate mats, it makes them too slippery.

Quilt Block Record Sheets
Locate in blacklines; run copies. For most efficient storage, these could either be in ziplock bags inside the box or in a folder set-up. For the latter, tape together three student folders with the pockets on the bottom. Cover the outside folder with the Contact paper of your Pattern baxes.

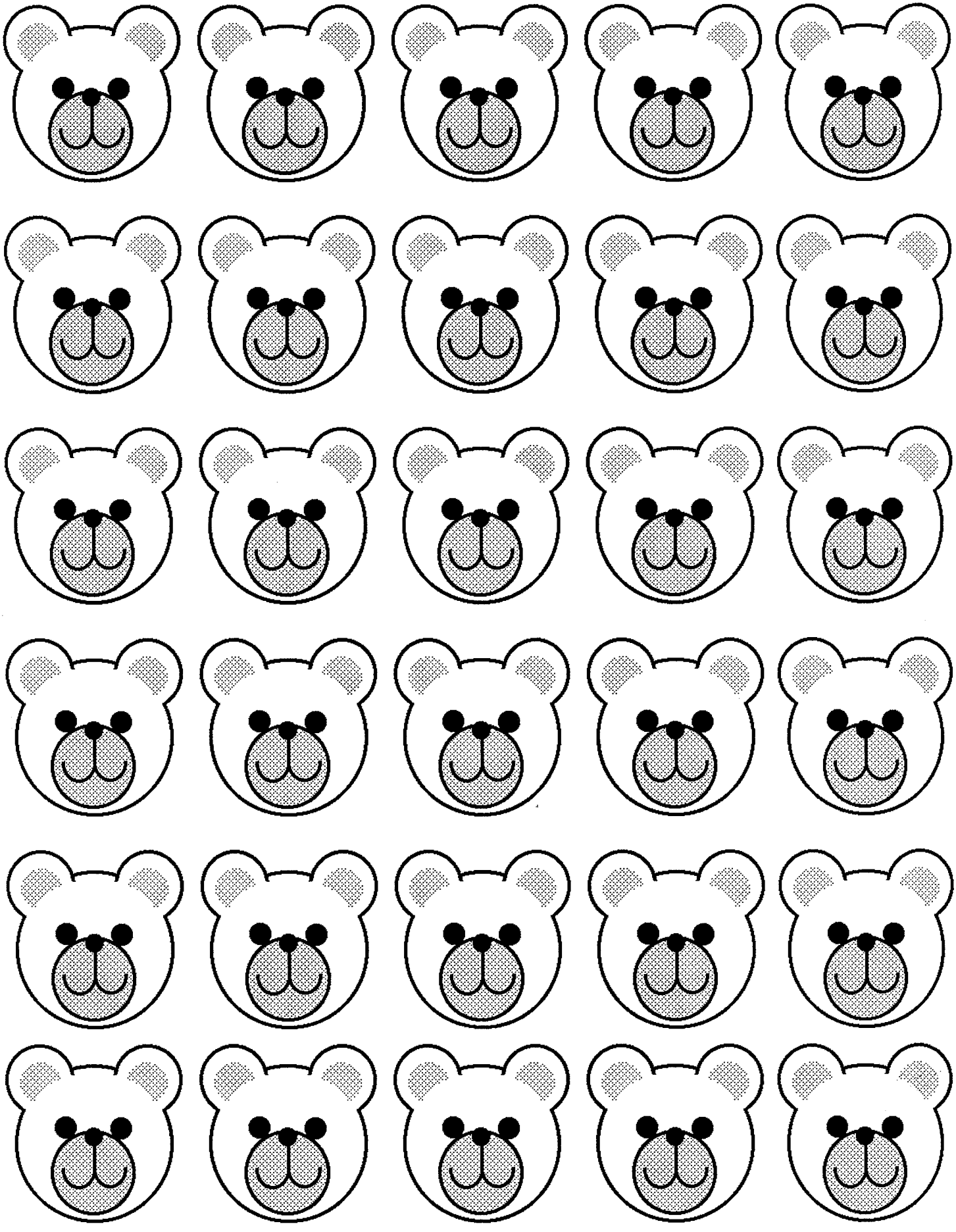


Be sure to model this activity with the children so they get the idea. Point out how corners are alike, etc. If you've never "played" with quilt blocks, play around with it yourself—it's lots of fun!

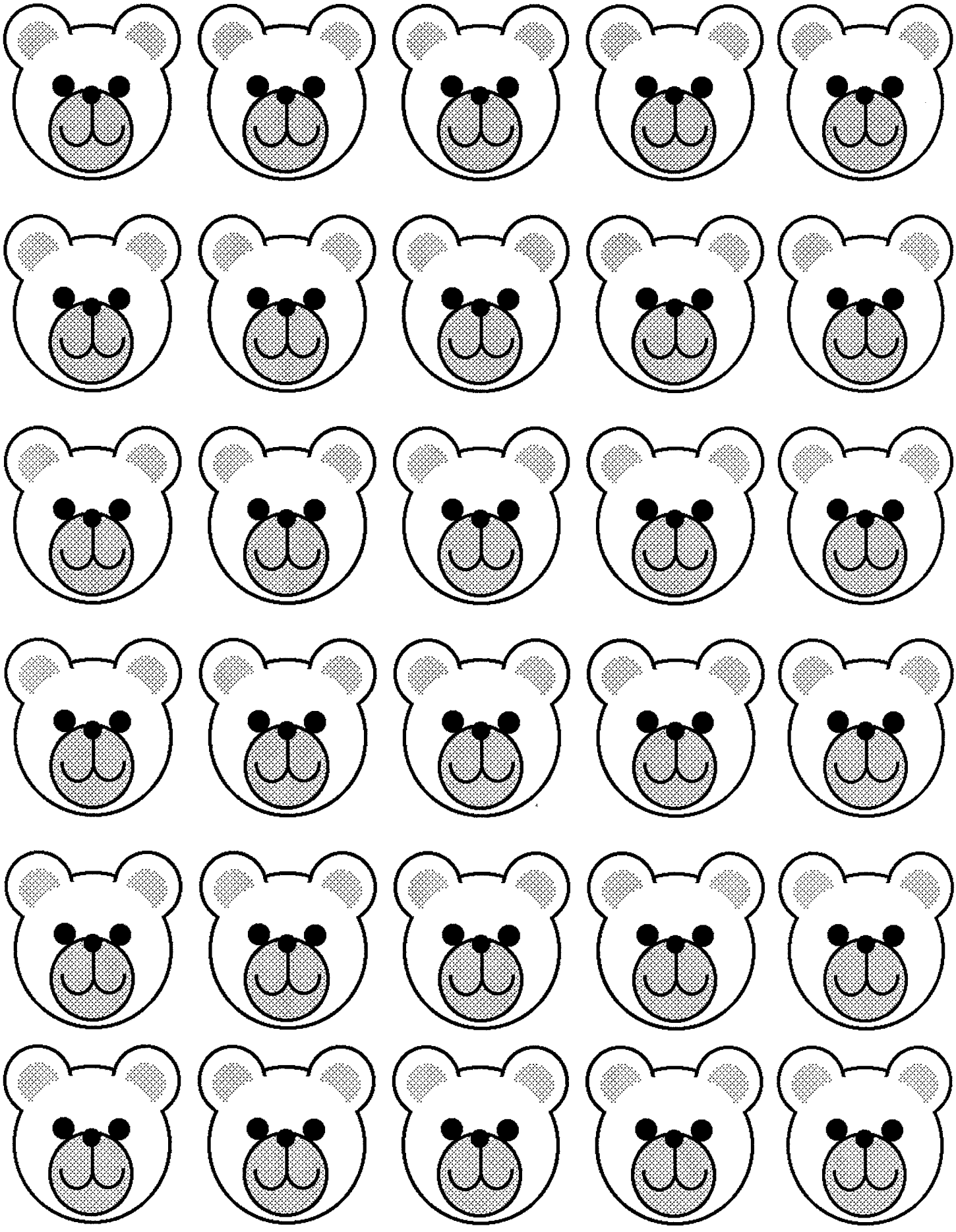
Blacklines

Patterns, cards, spinners, and other materials you'll make for the Practice & Enrichment Boxes described in this packet.

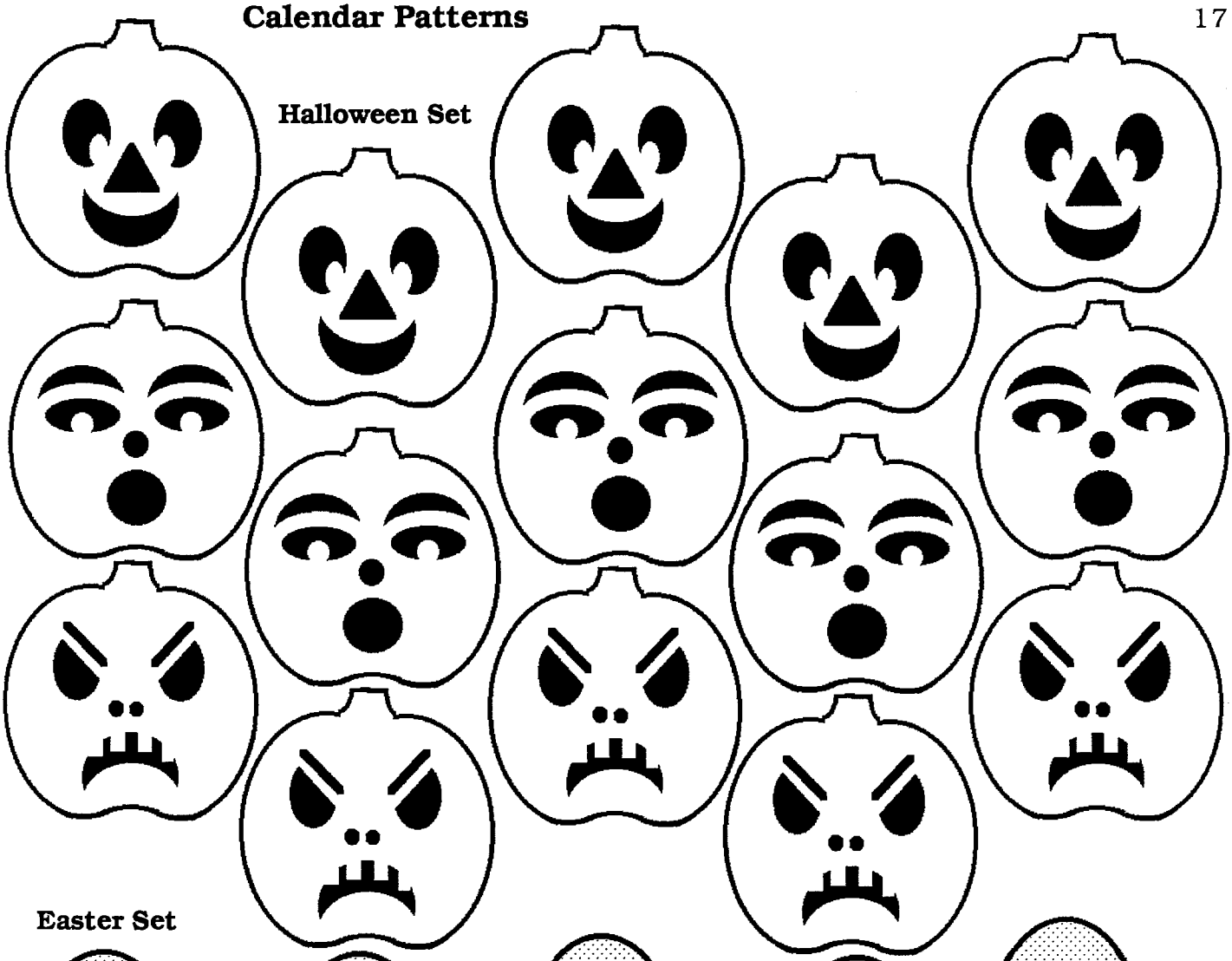
Bears



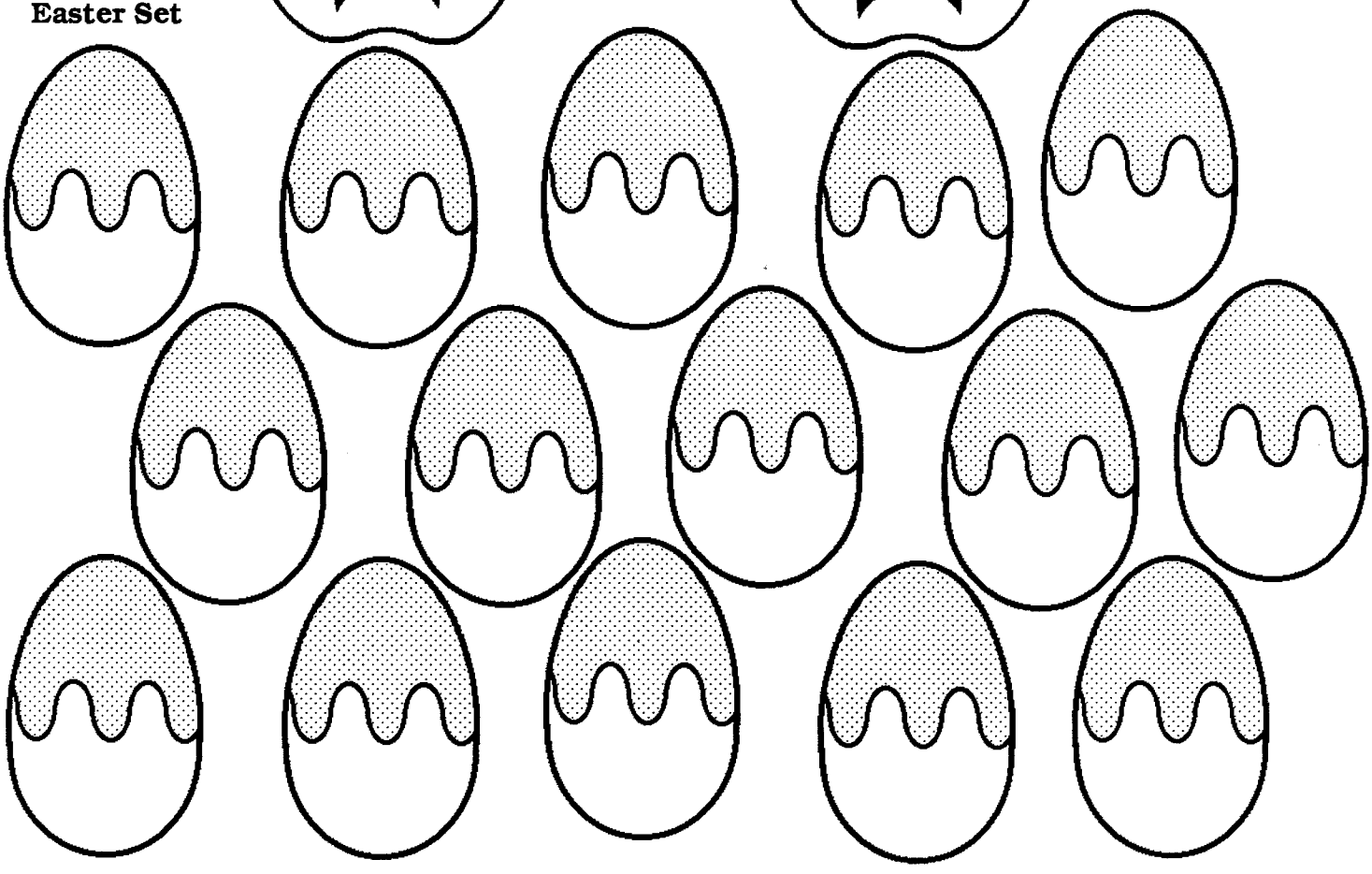
Bears



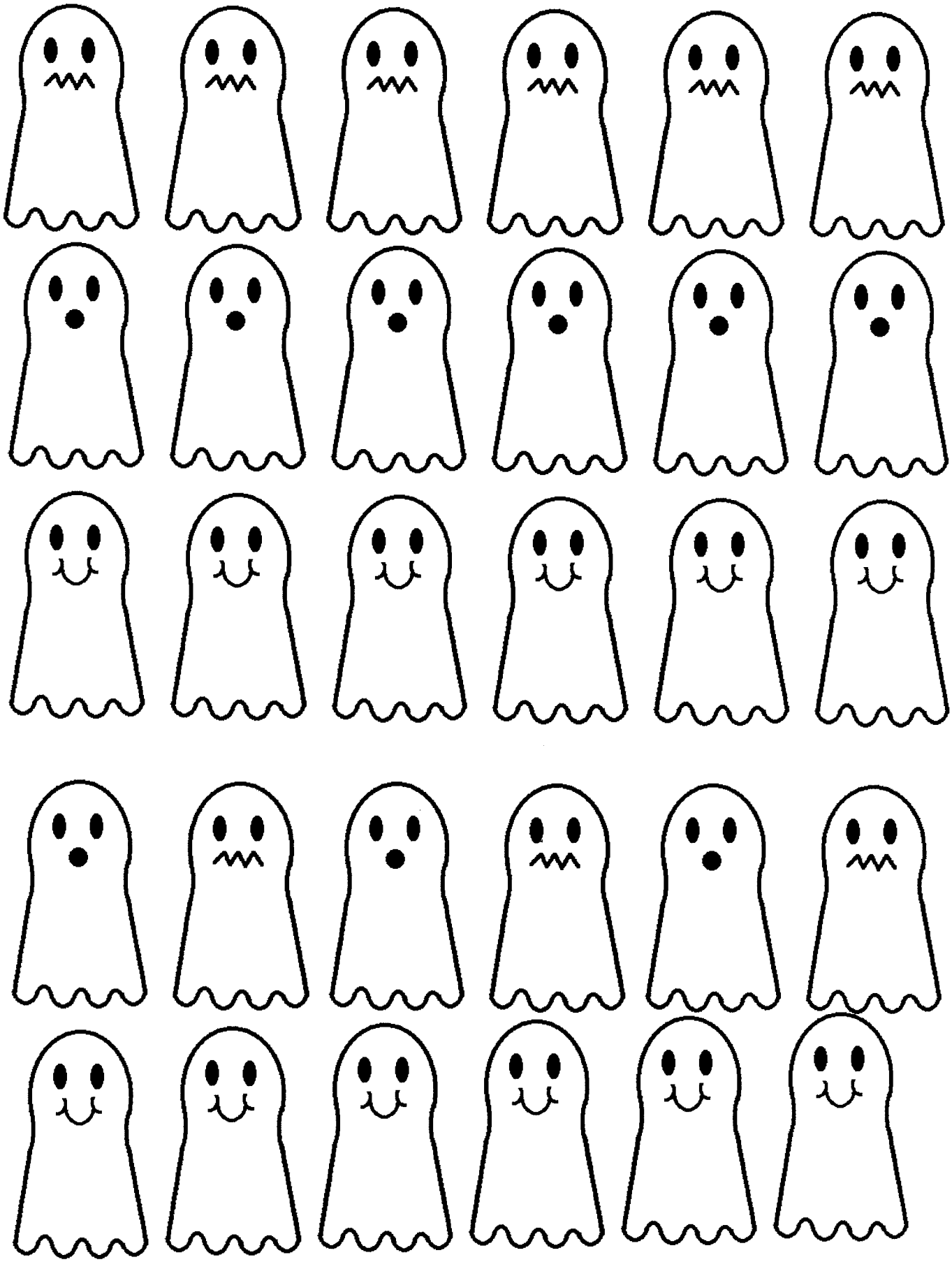
Halloween Set



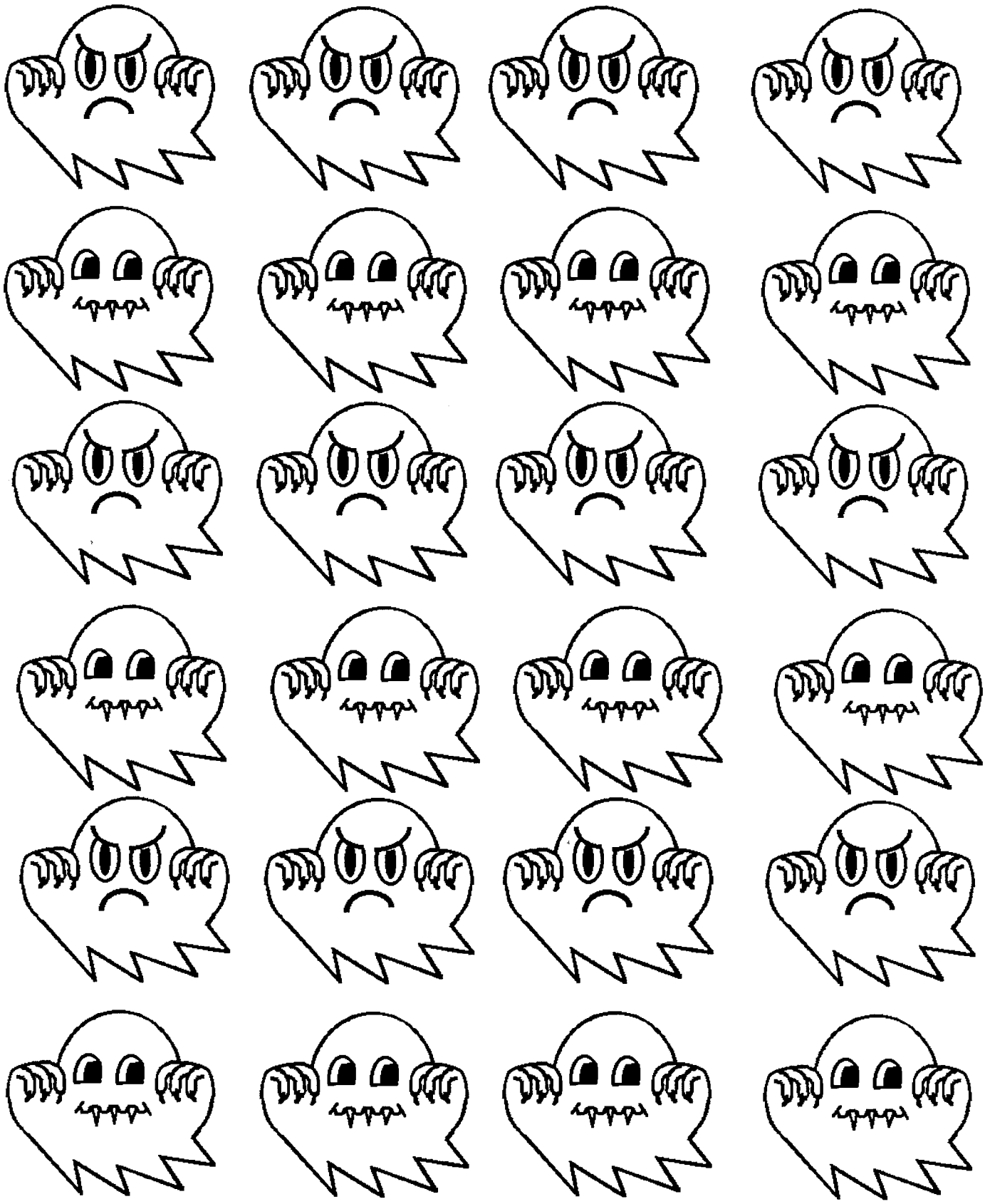
Easter Set



Halloween Set

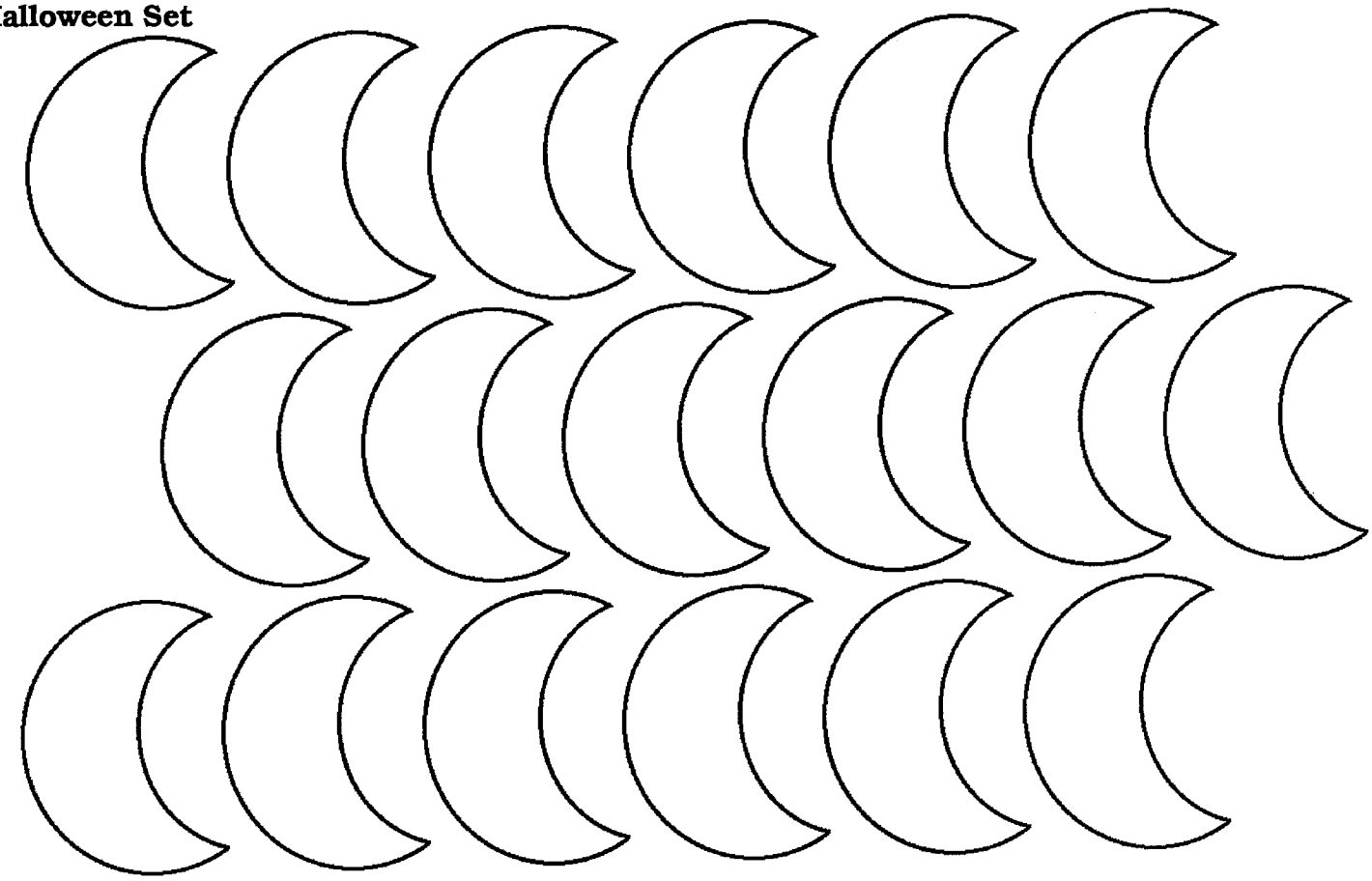


Halloween Set

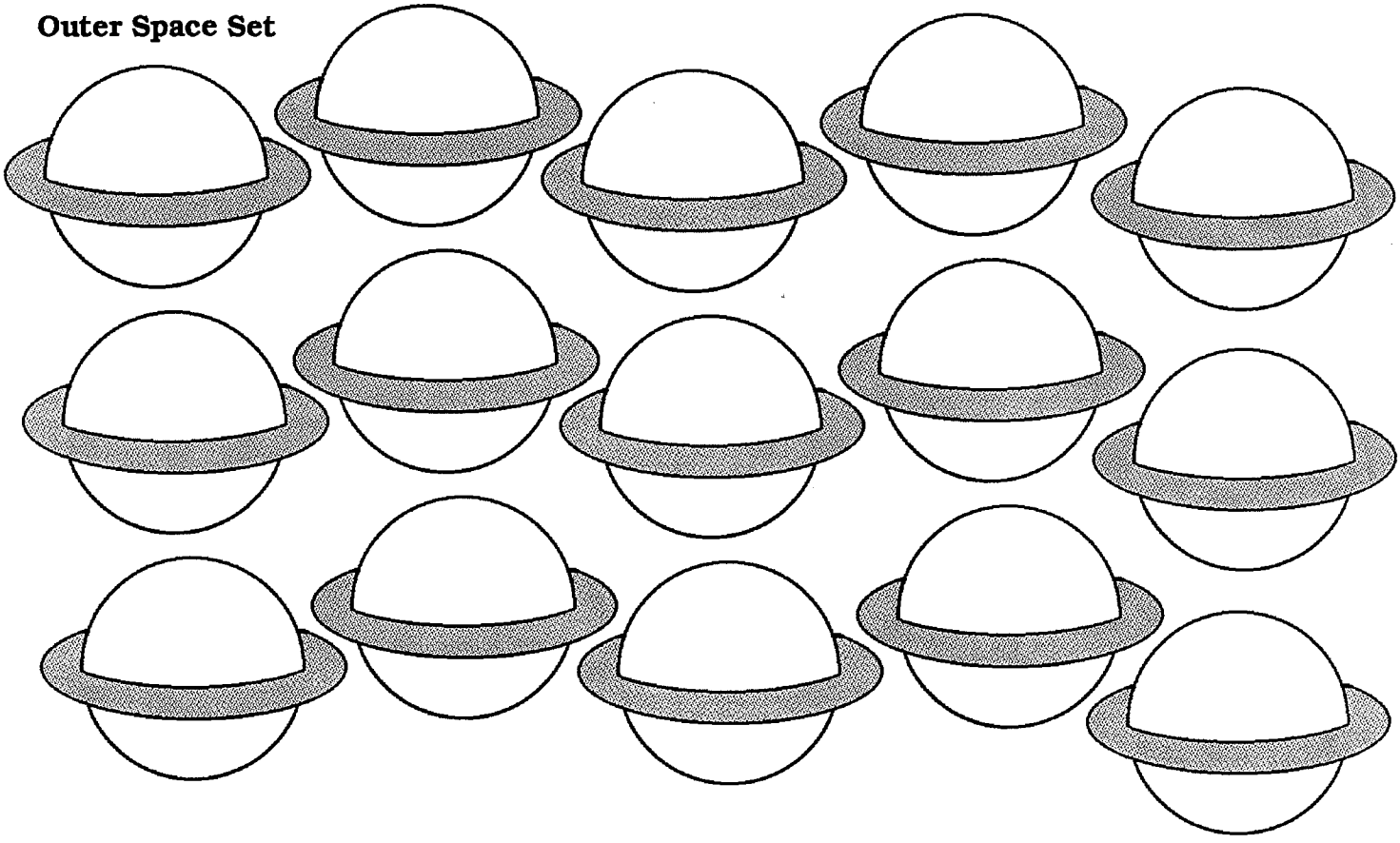


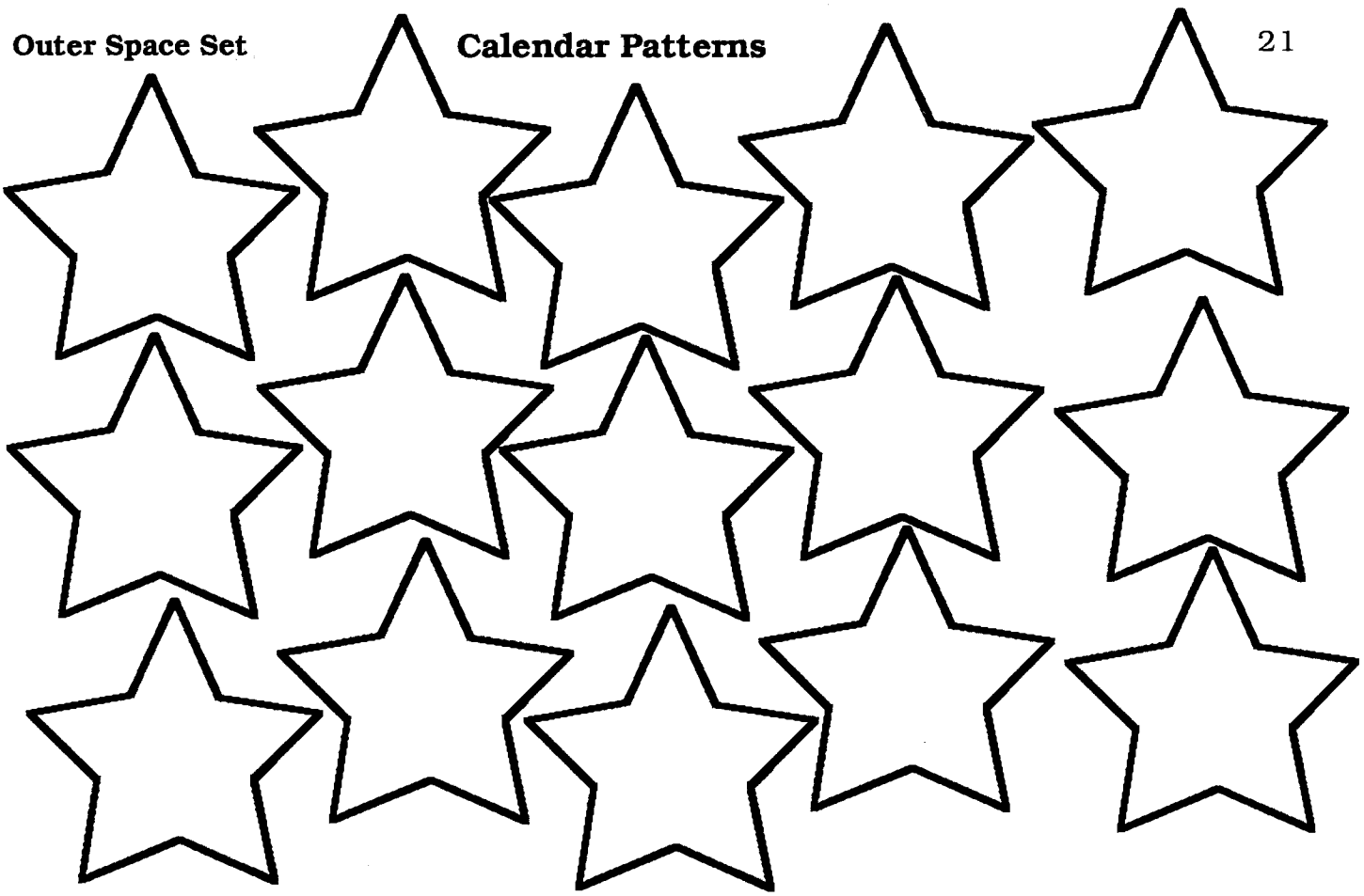
Calendar Patterns

Halloween Set

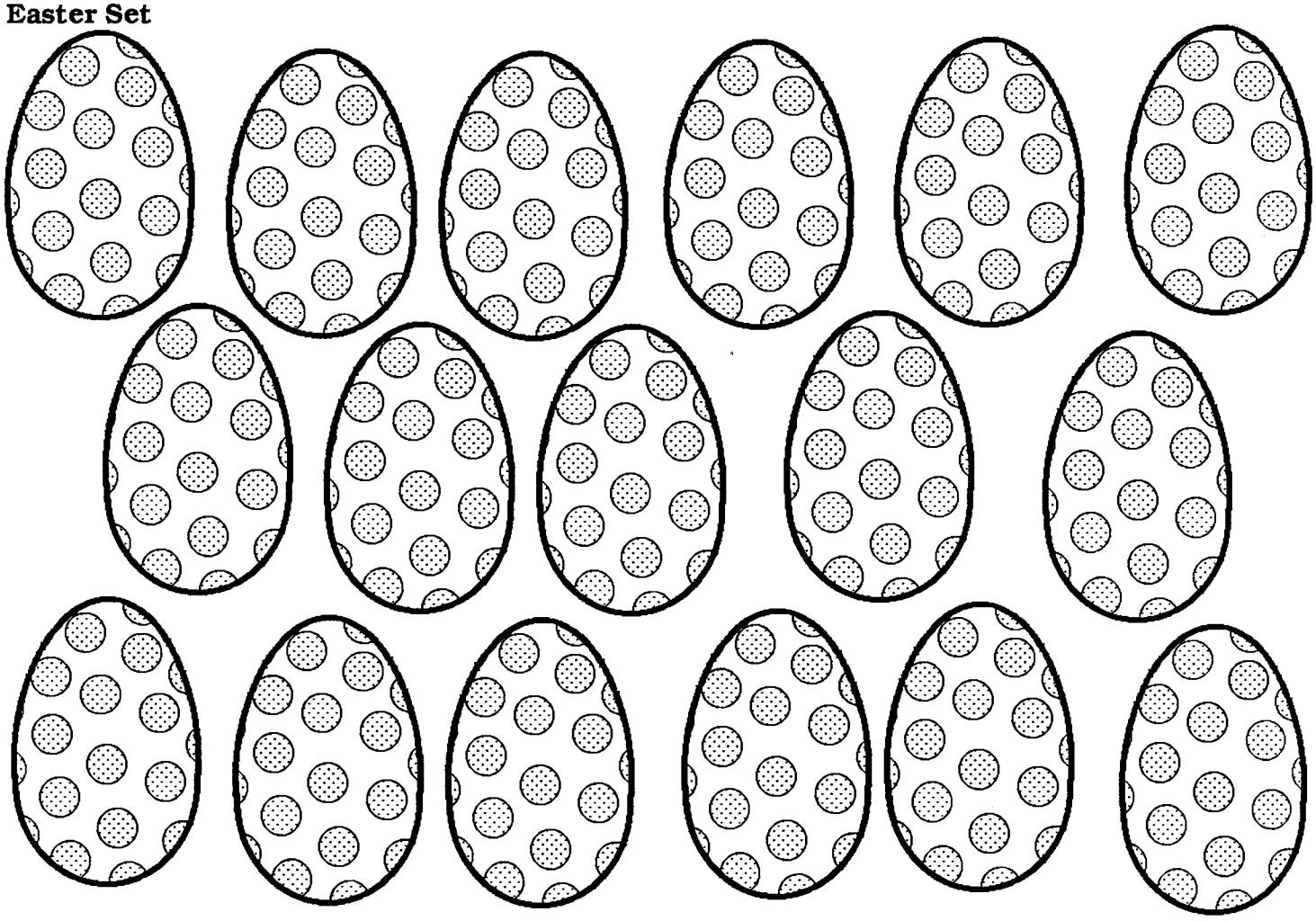


Outer Space Set



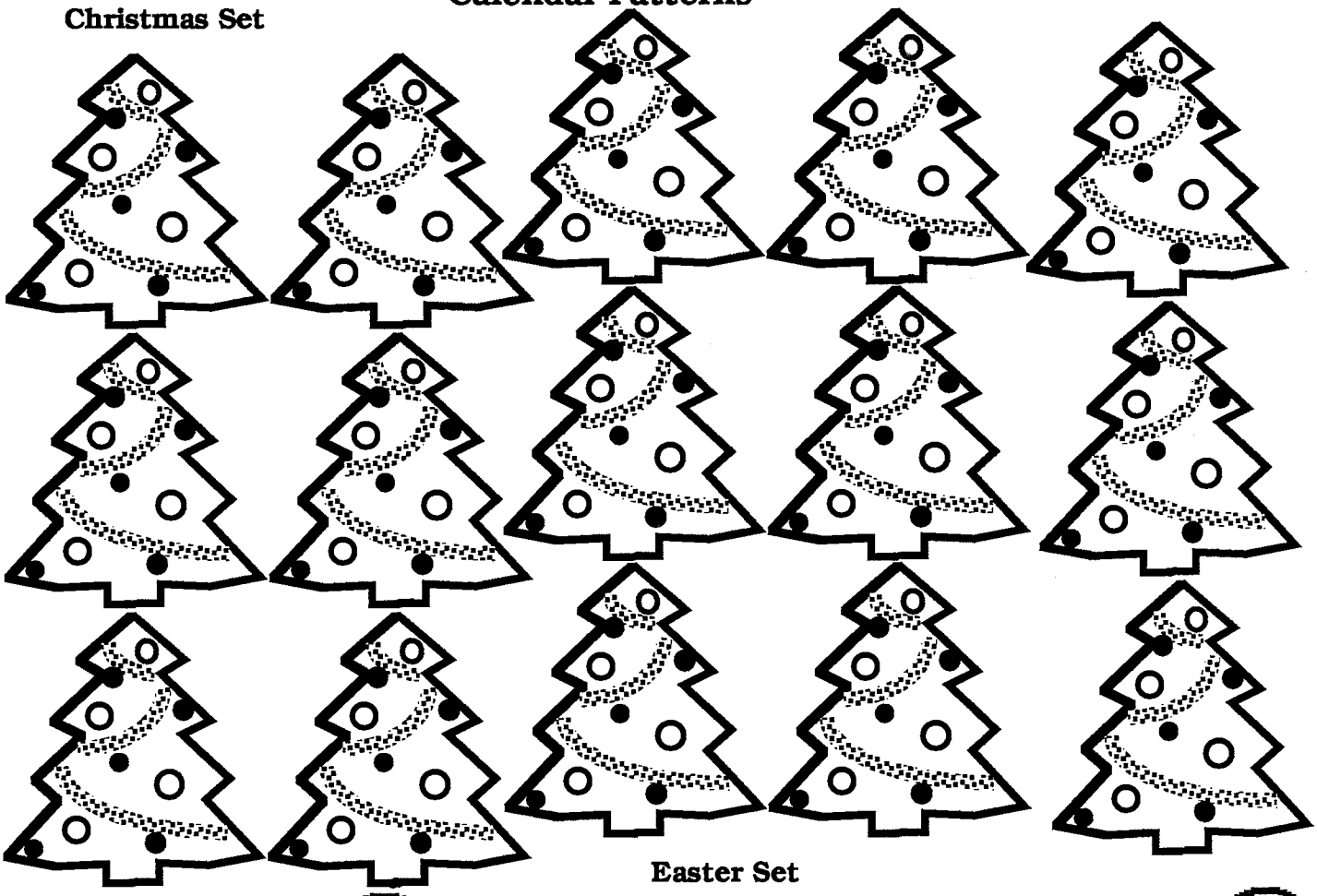


Easter Set



Calendar Patterns

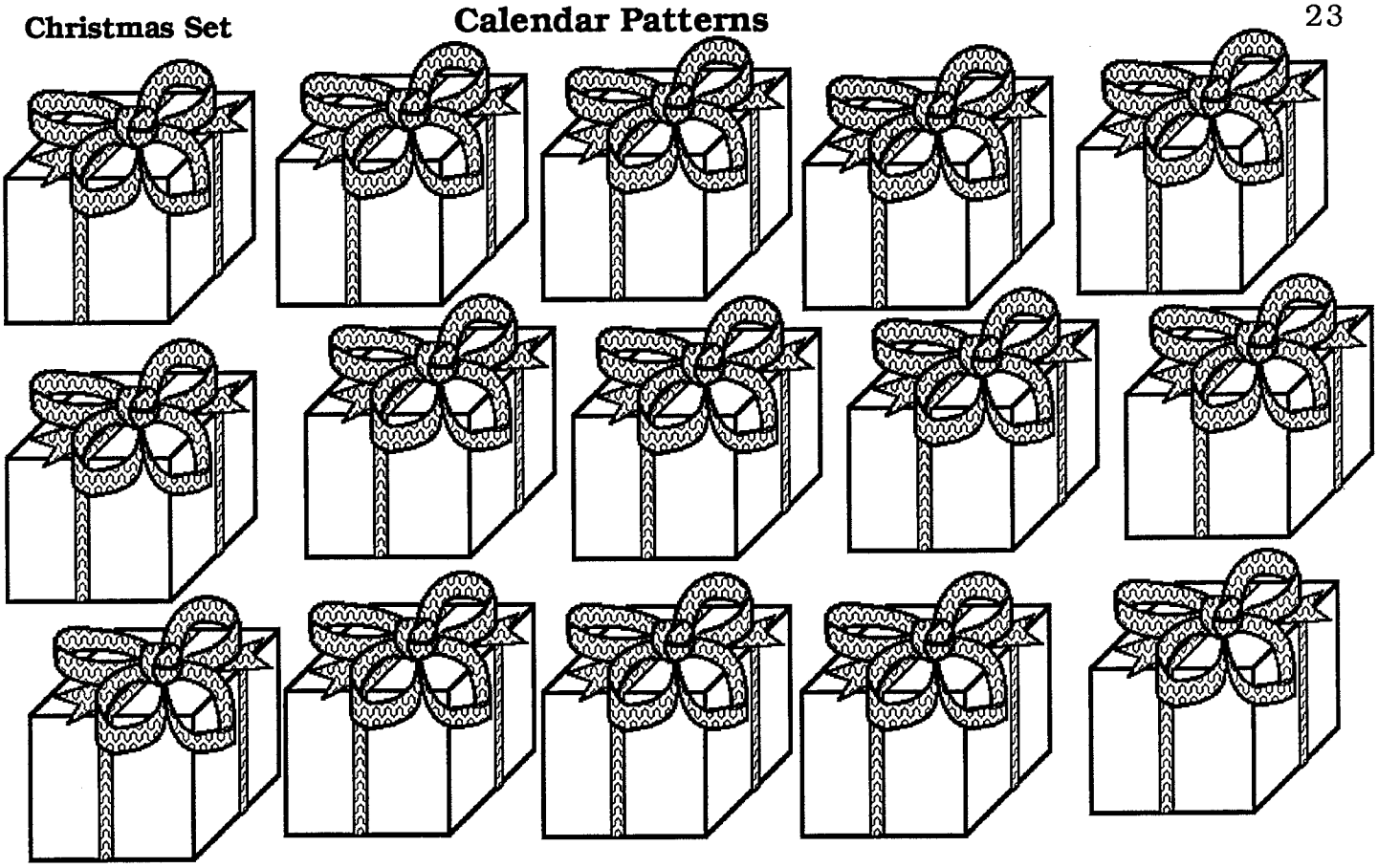
Christmas Set



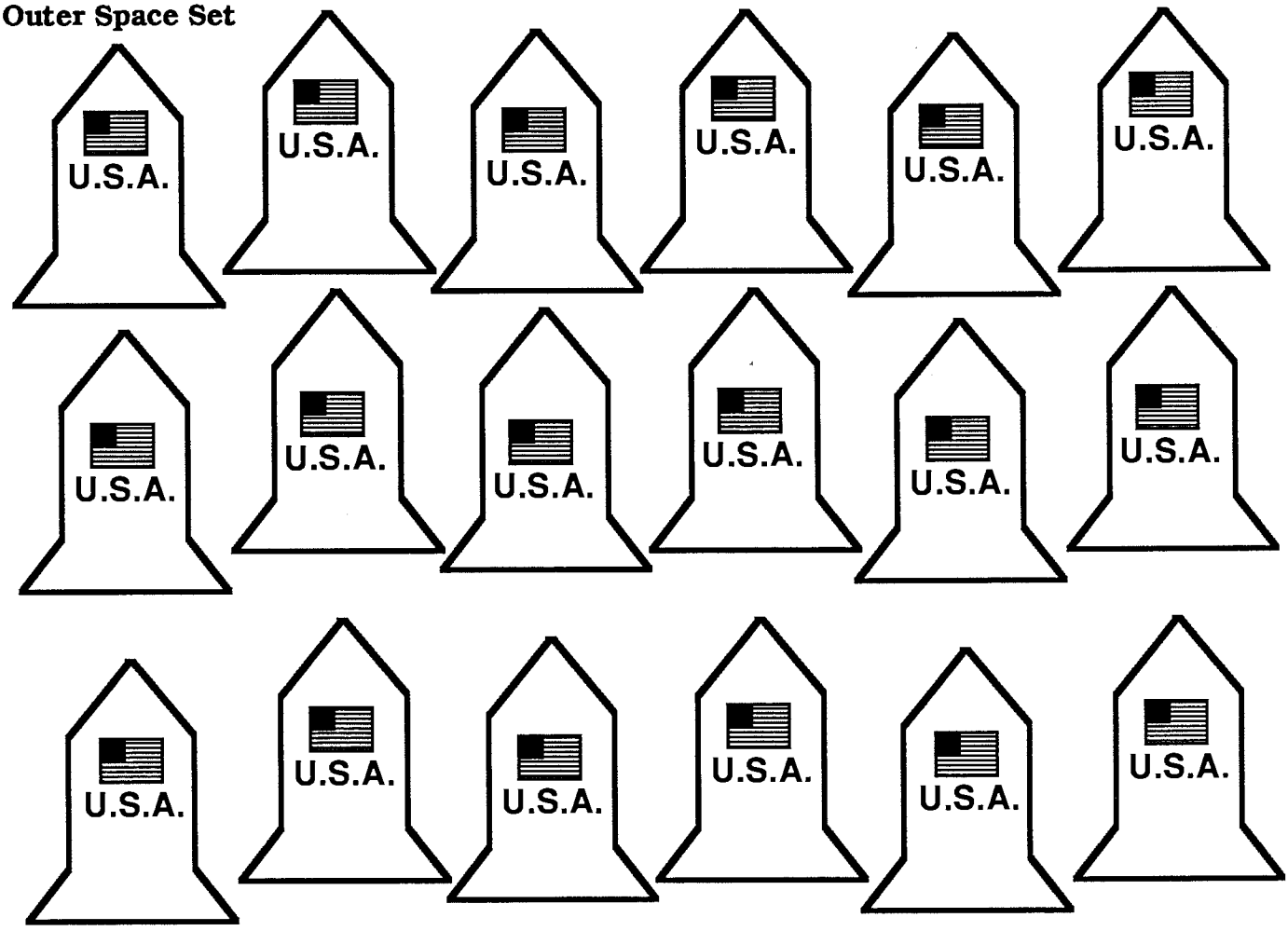
Easter Set

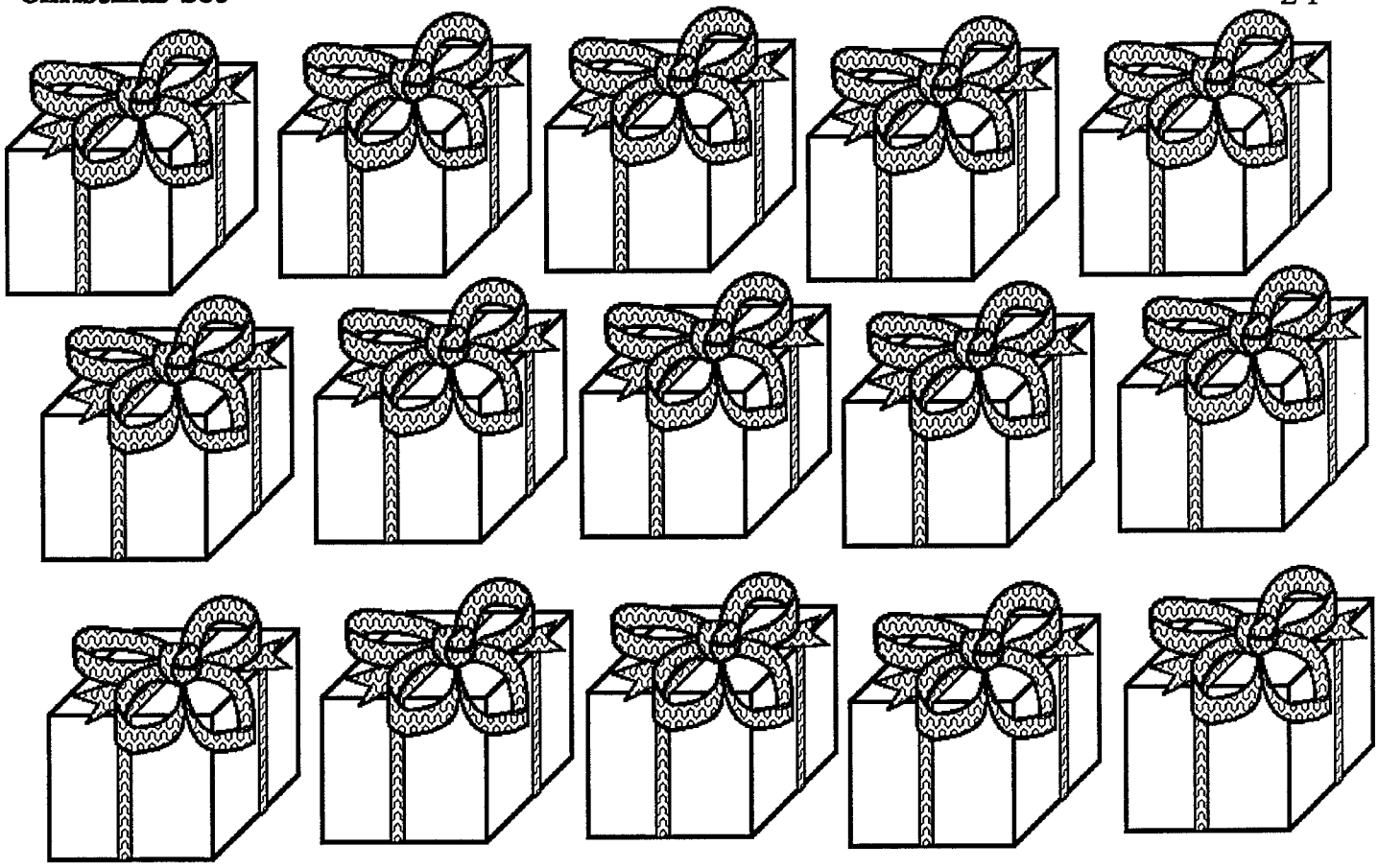
Calendar Patterns

Christmas Set

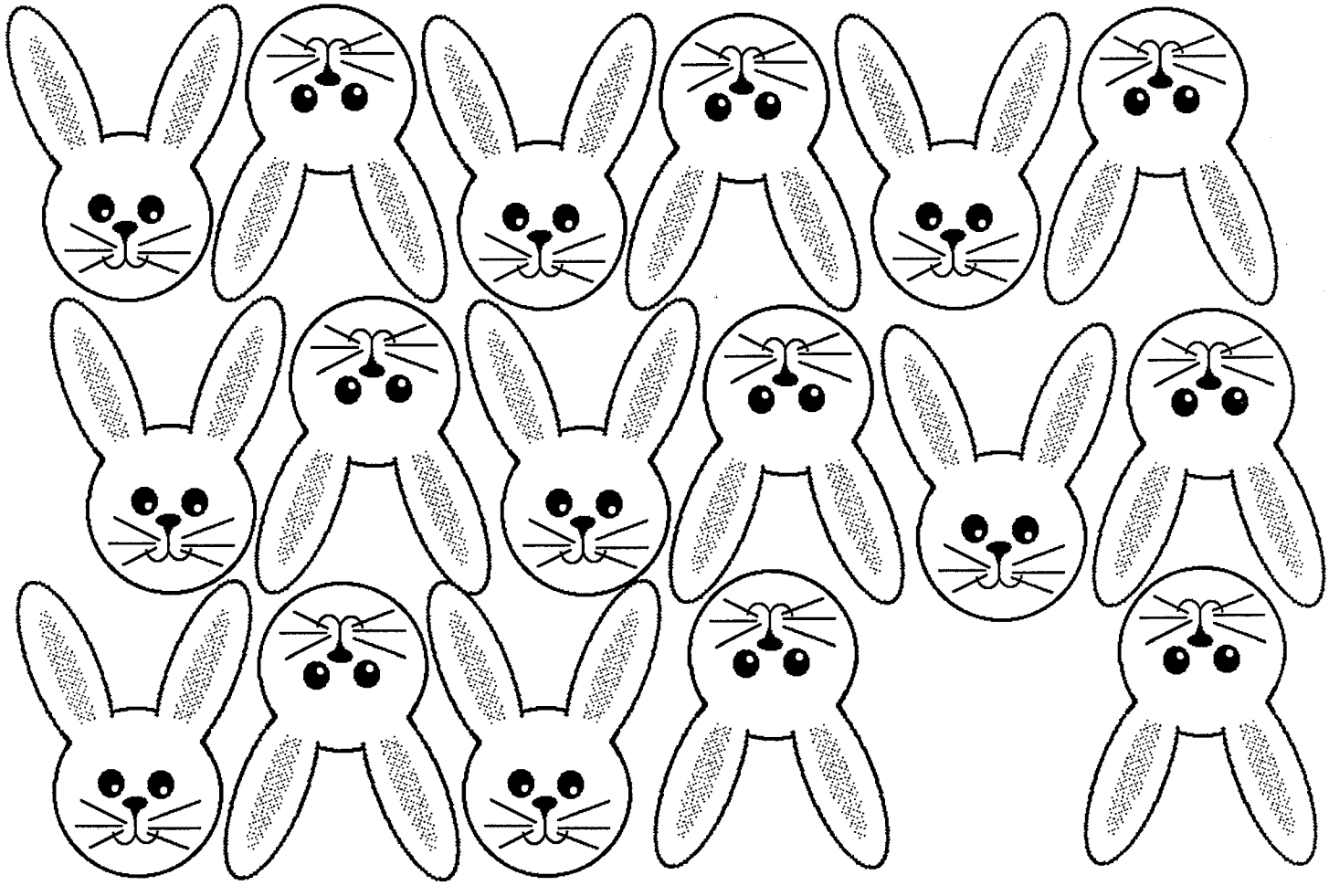


Outer Space Set

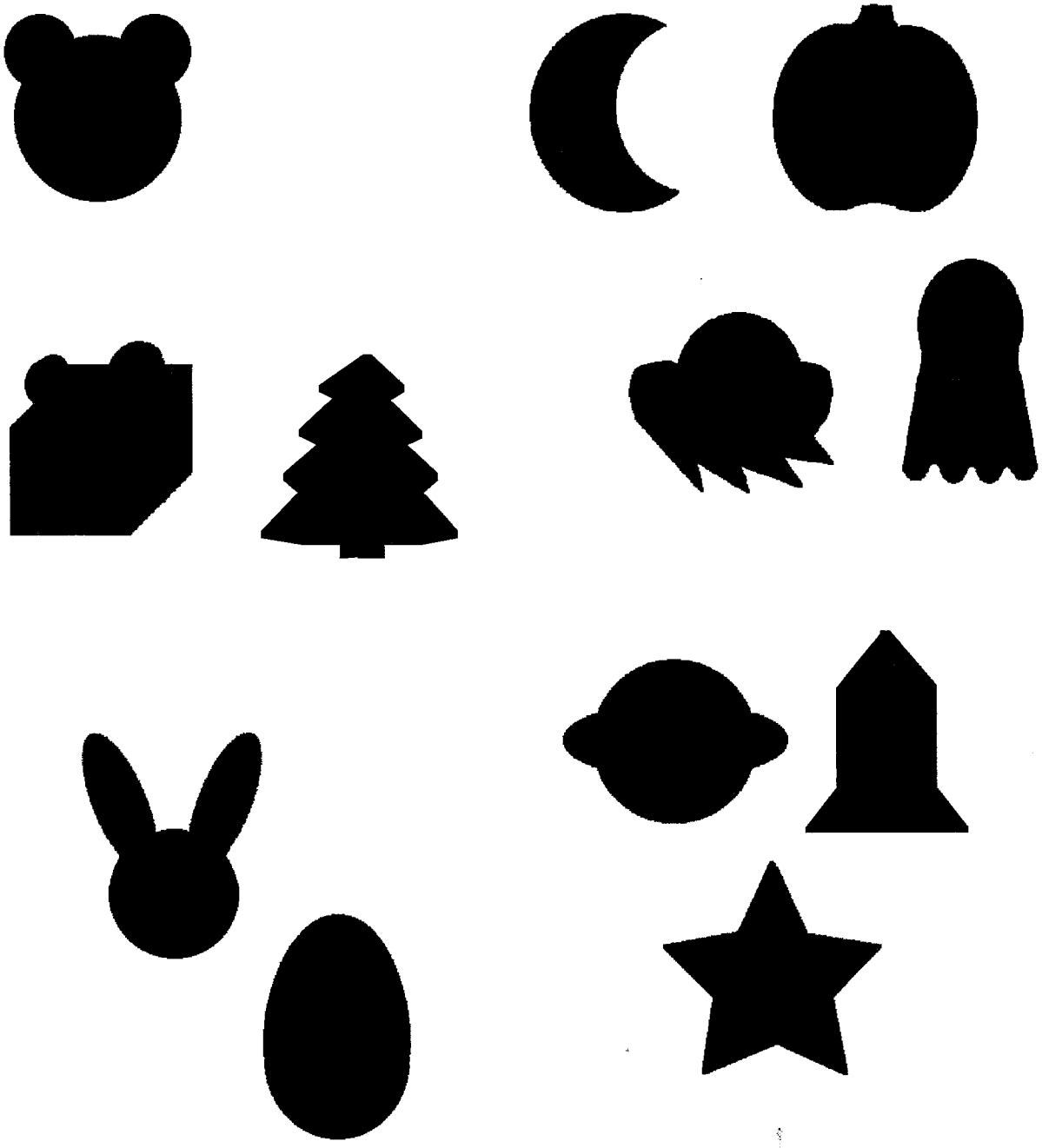




Easter Set



Templates Shapes for Margarine Lids
for Calendar Patterns

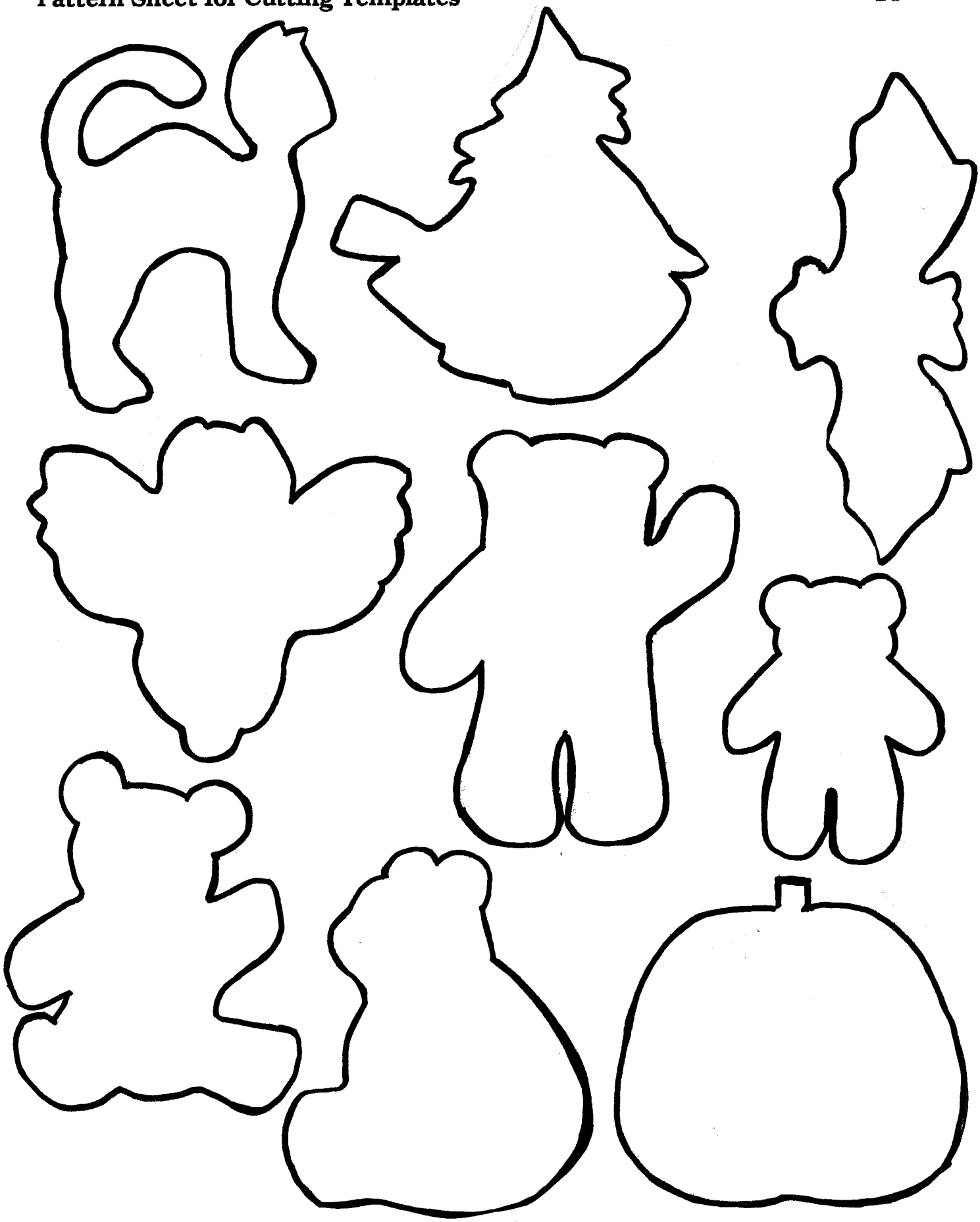


month

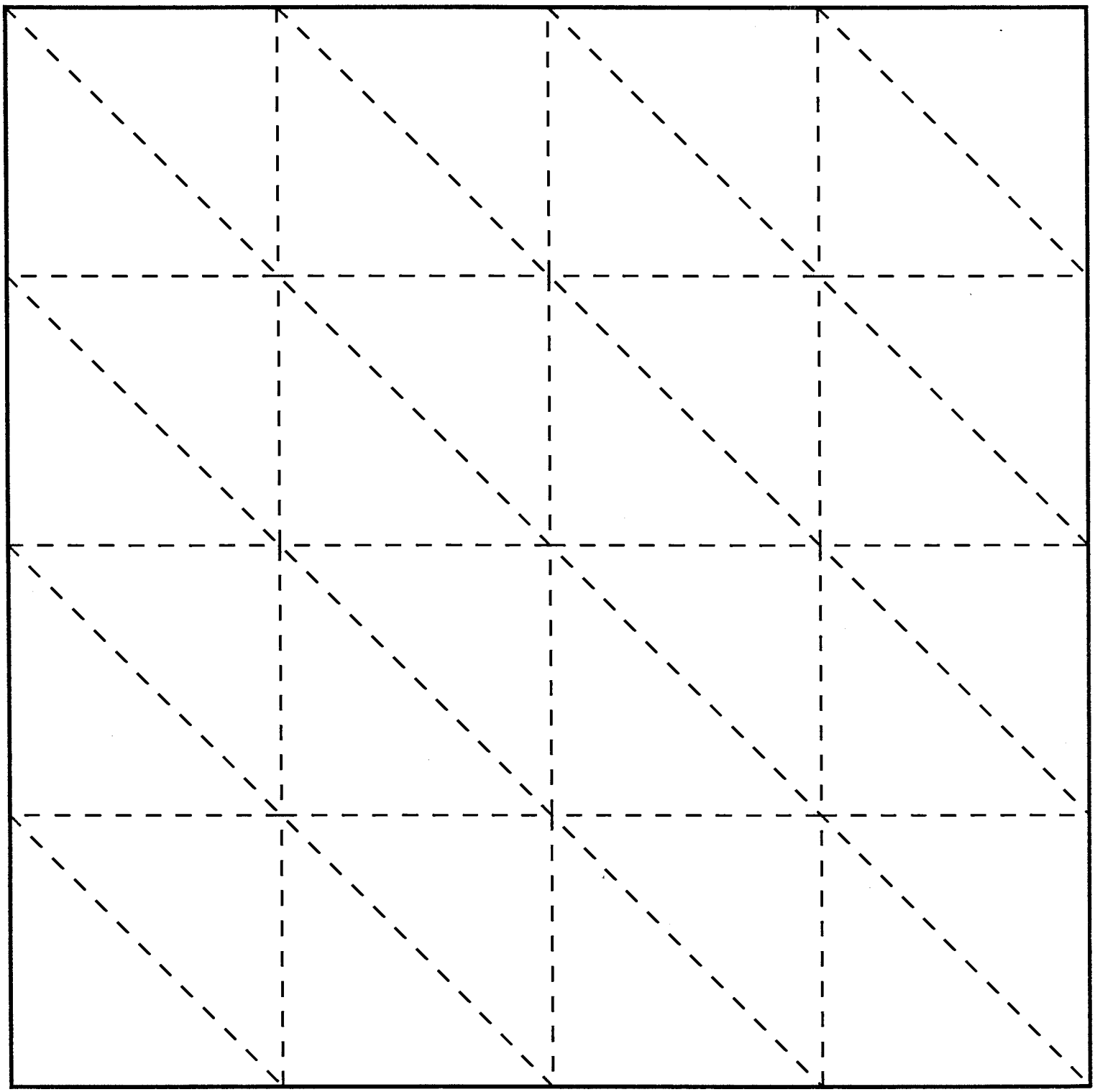
pattern

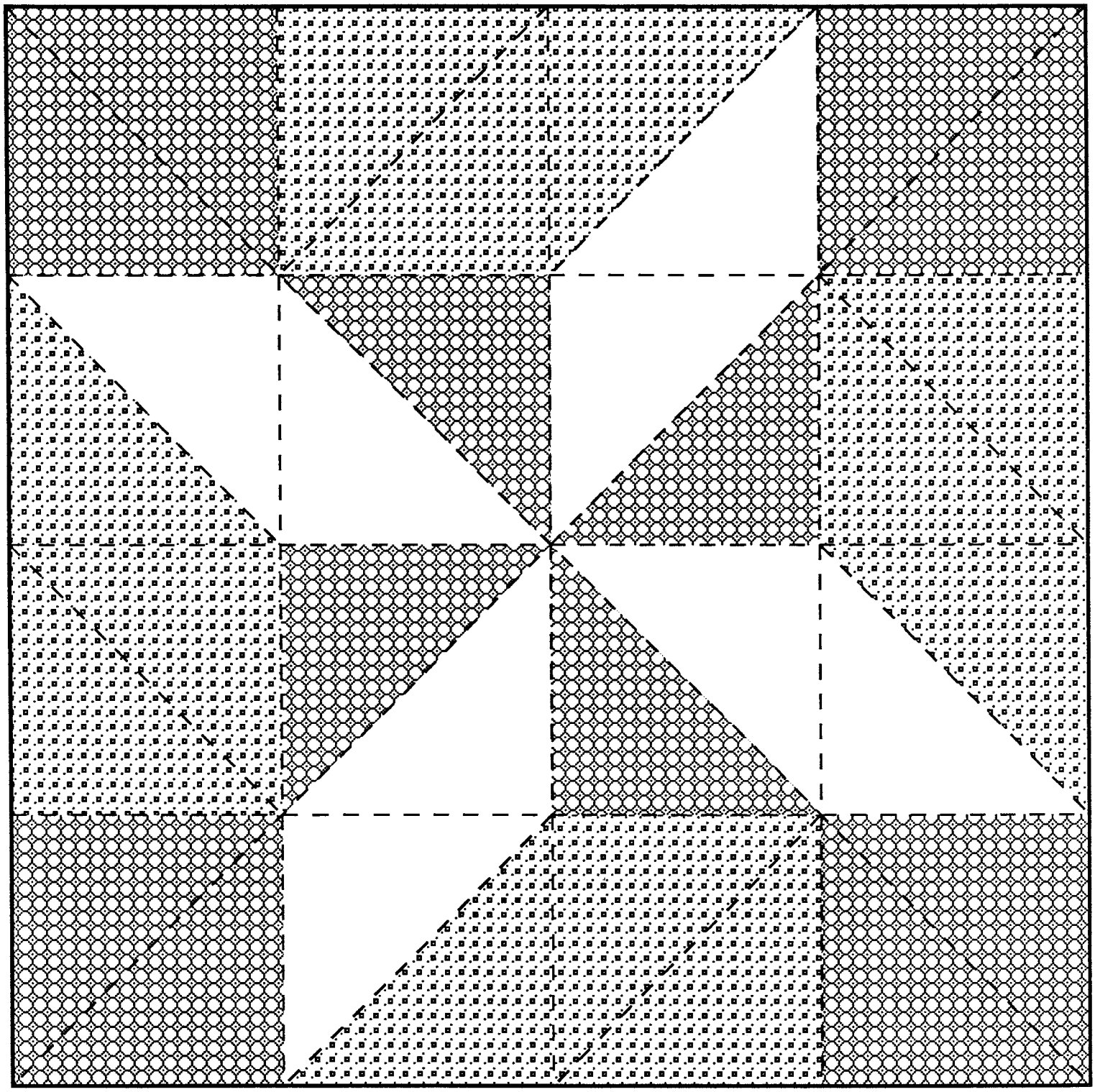
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday

Calendar Record Sheet



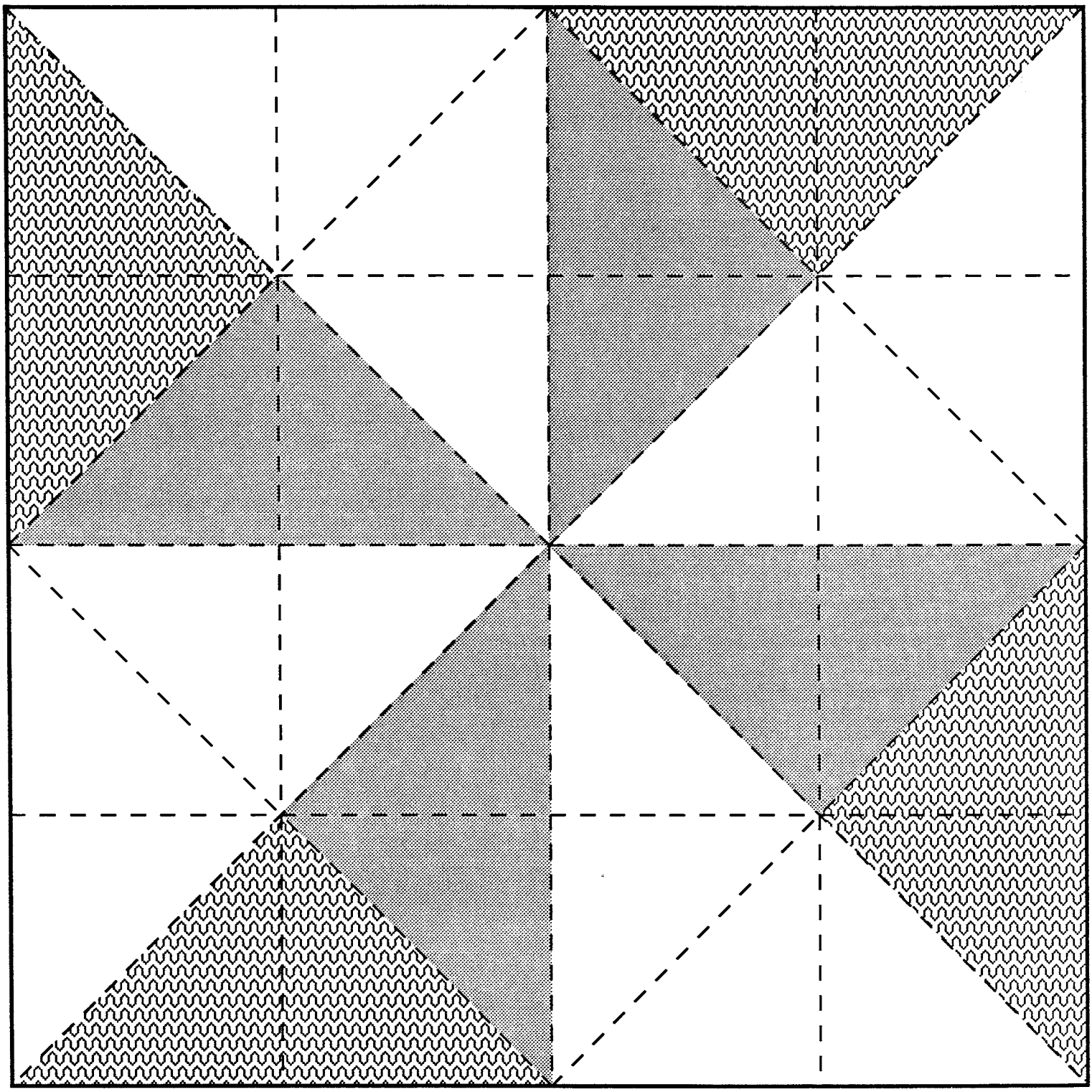
Children also enjoy hearts of varying sizes.





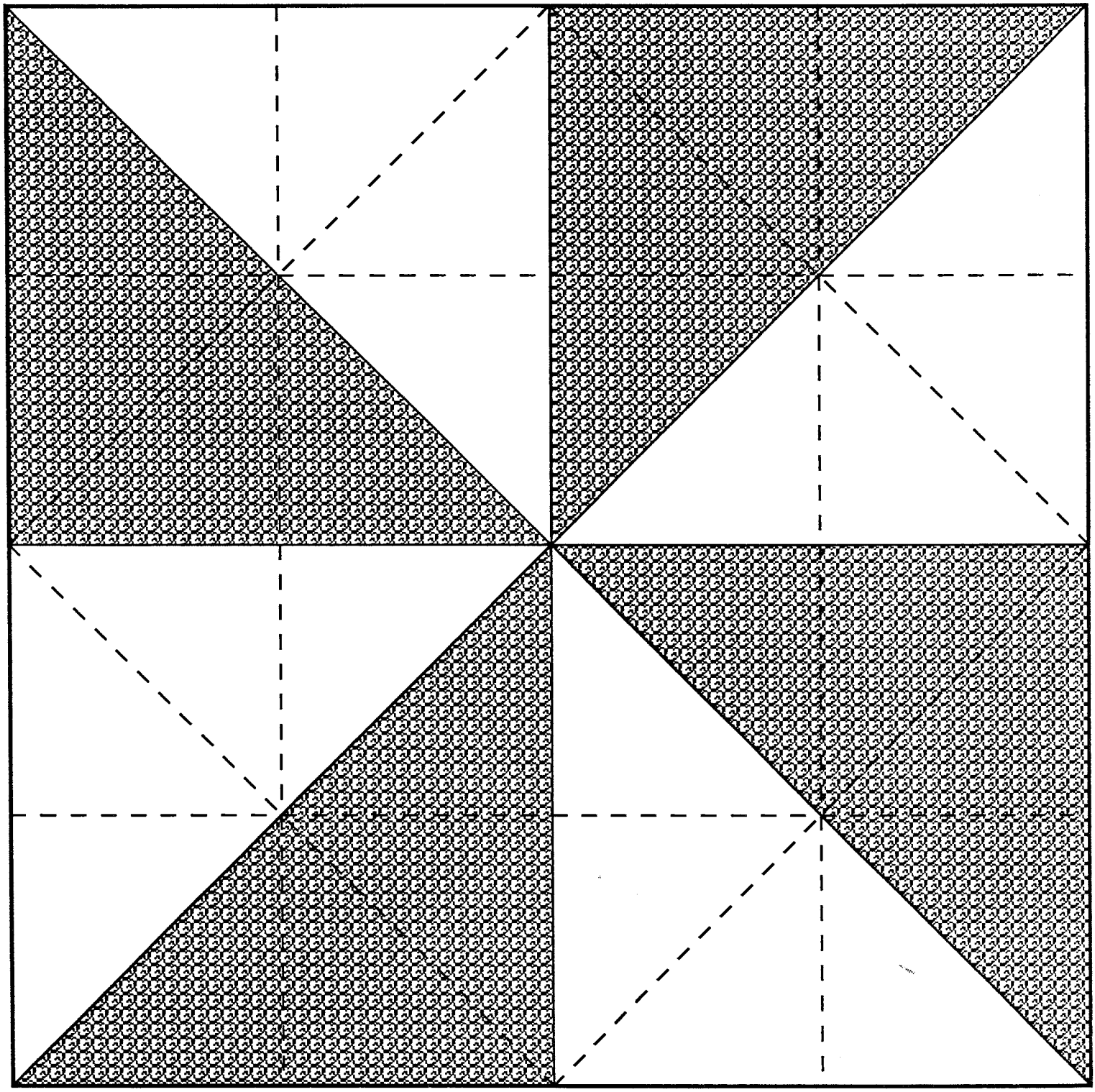
Clay's Choice

Name _____



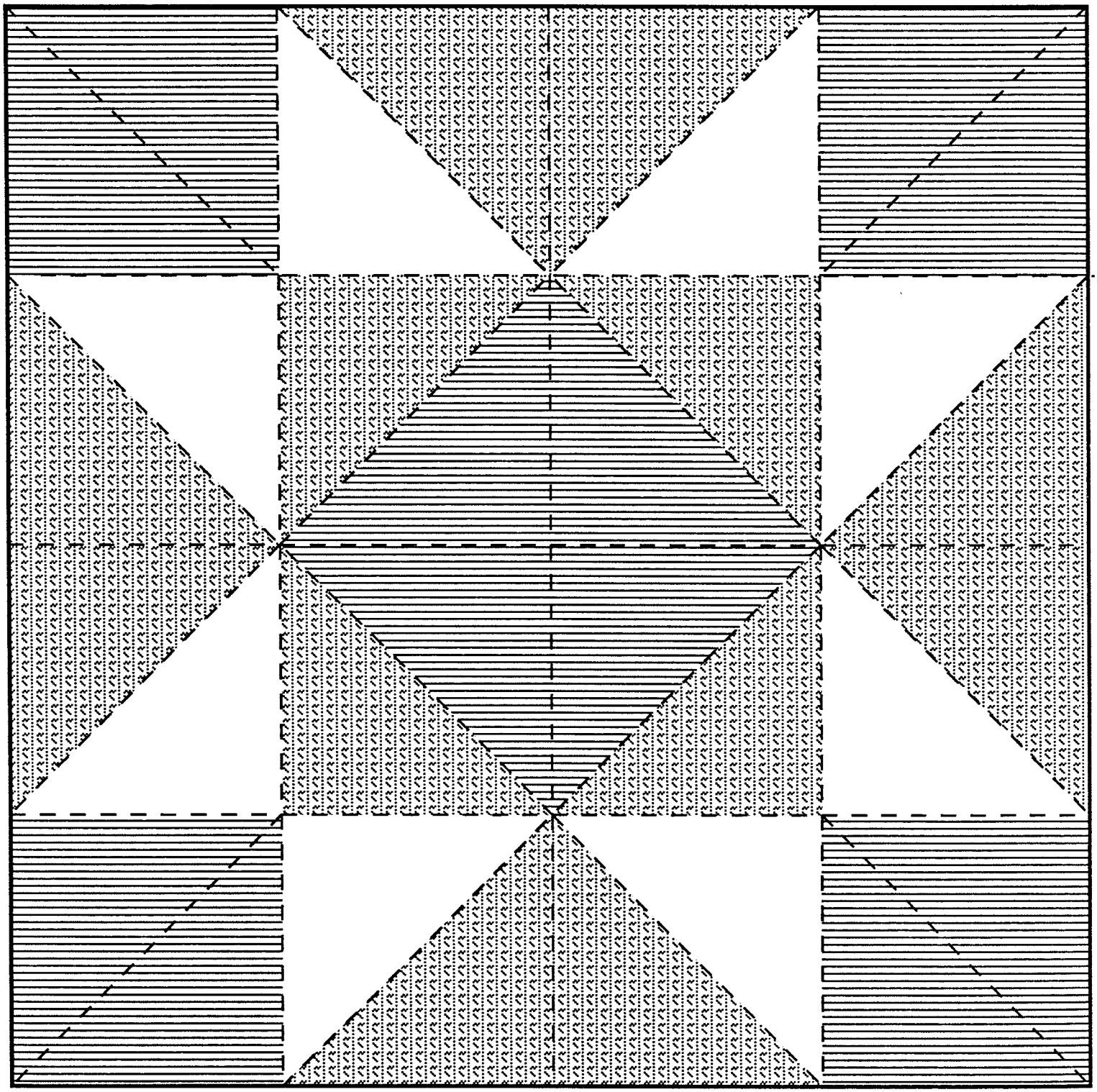
Whirligig

Name _____



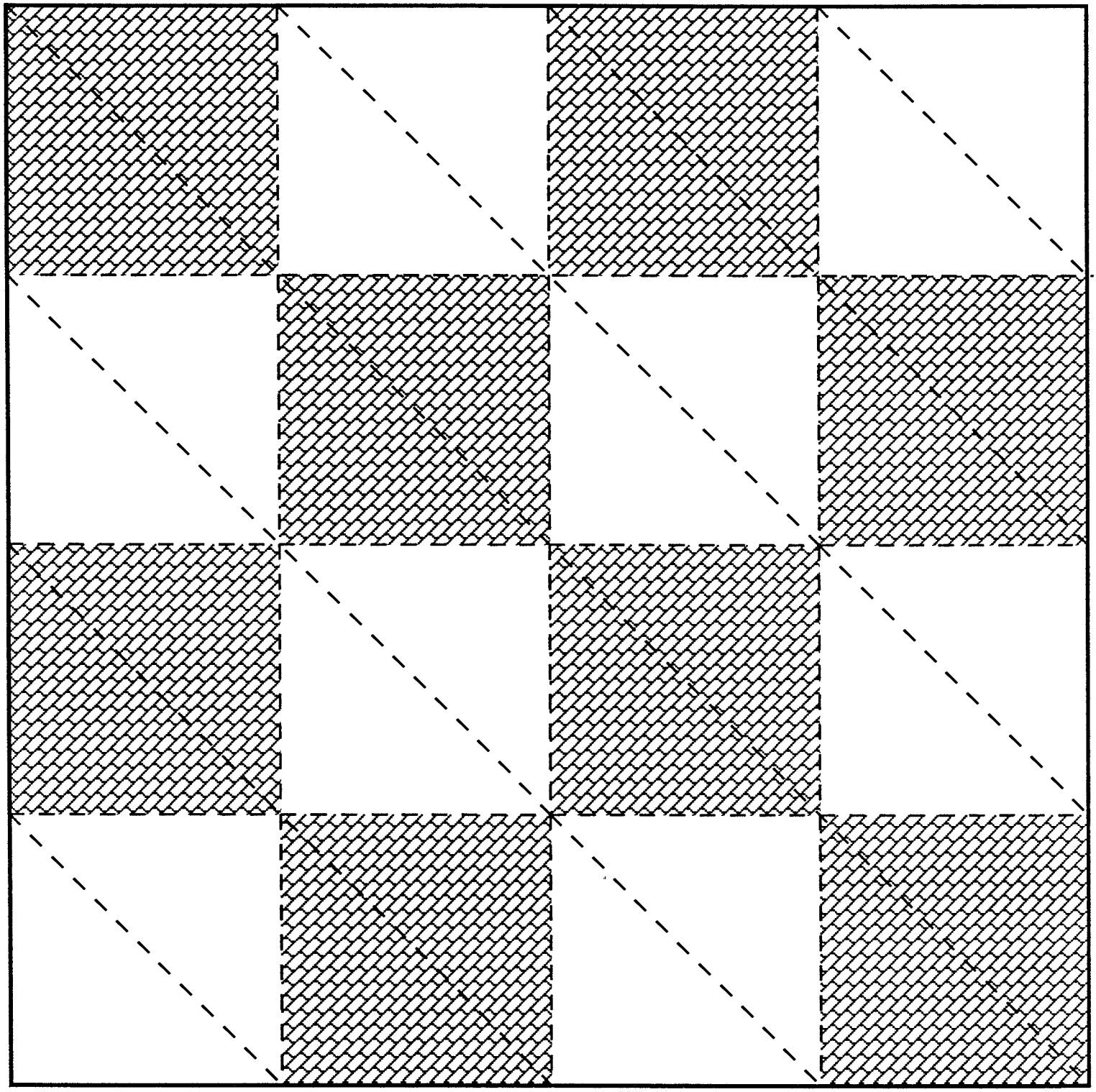
Windmill

Name _____



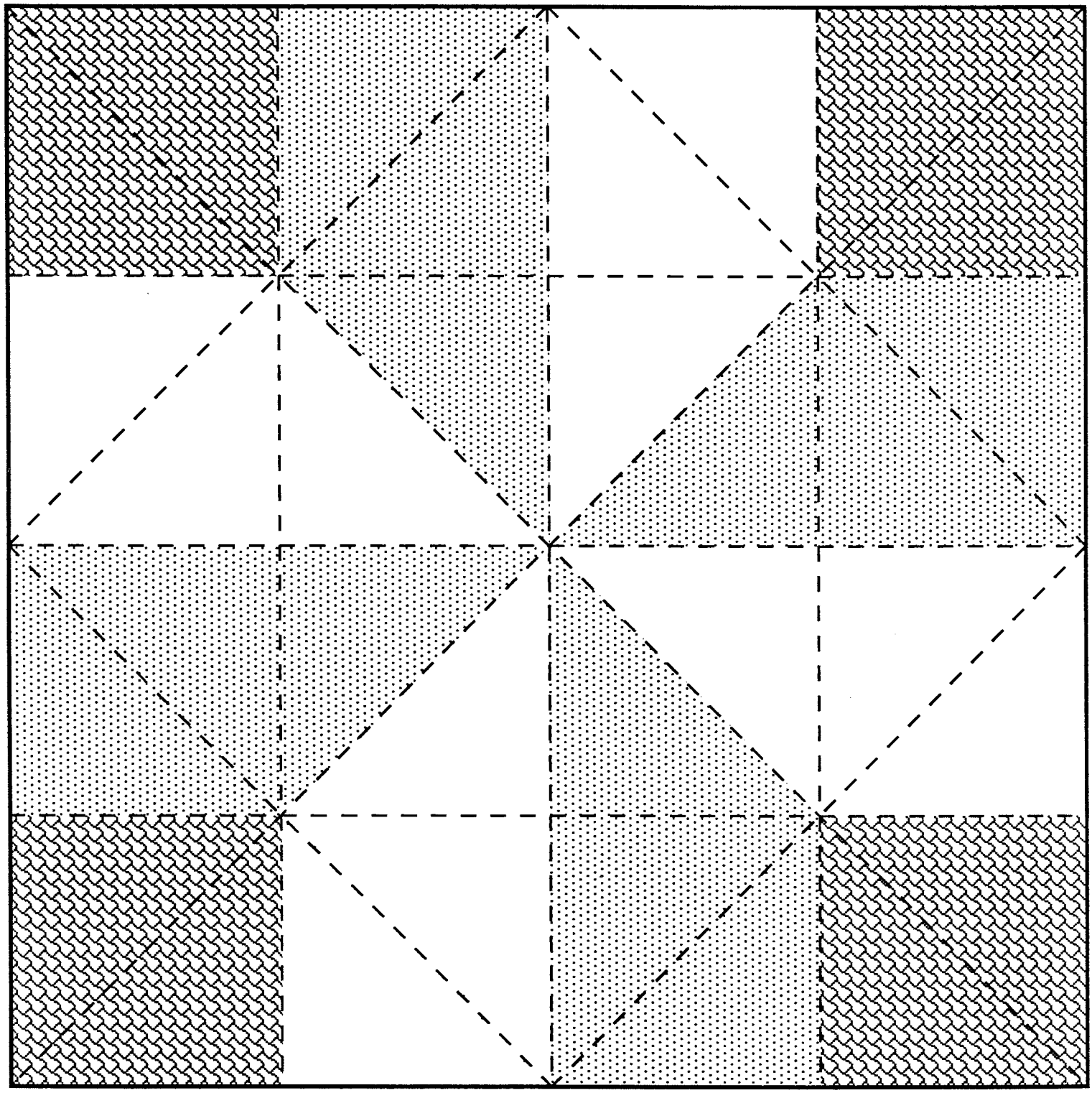
Evening Star

Name _____



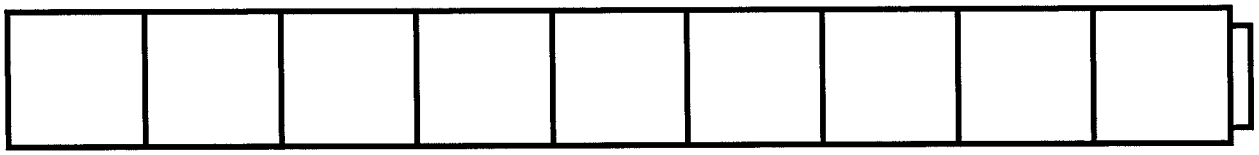
Checkerboard

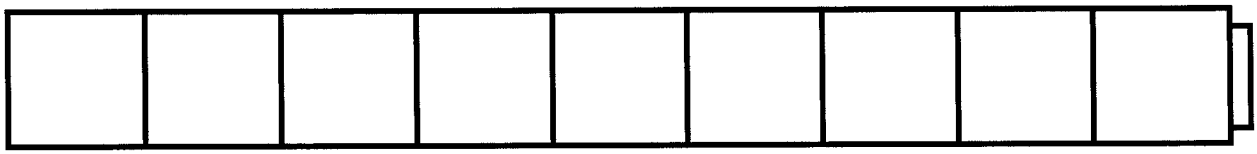
Name _____

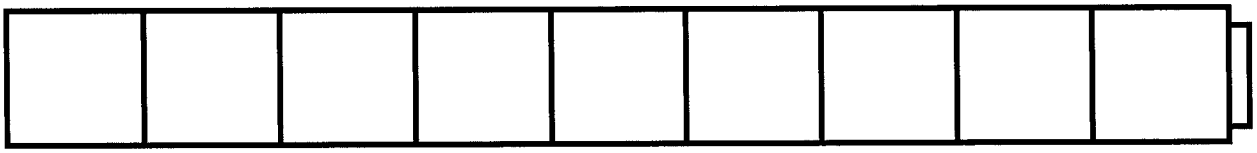


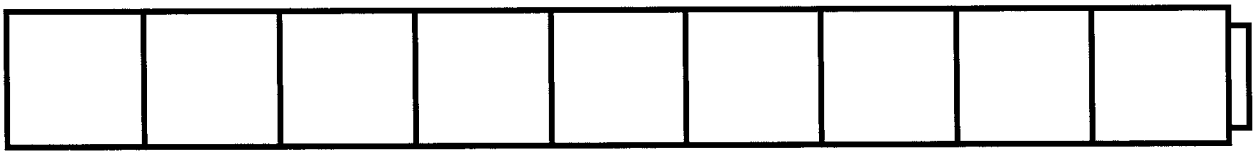
Nelson's Victory

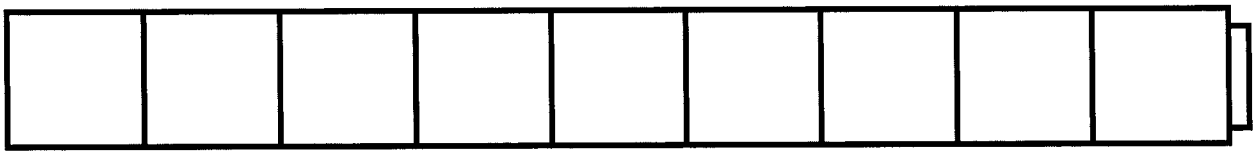
Name _____

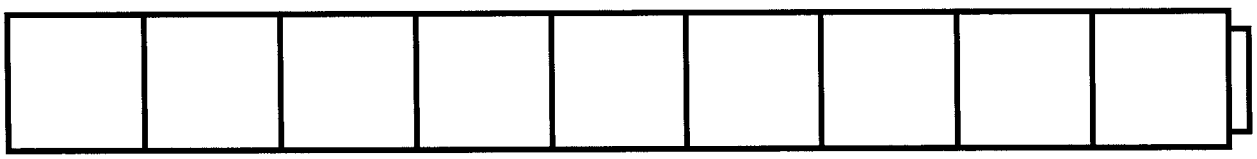


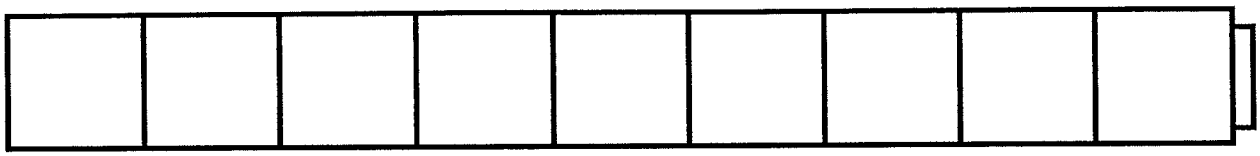


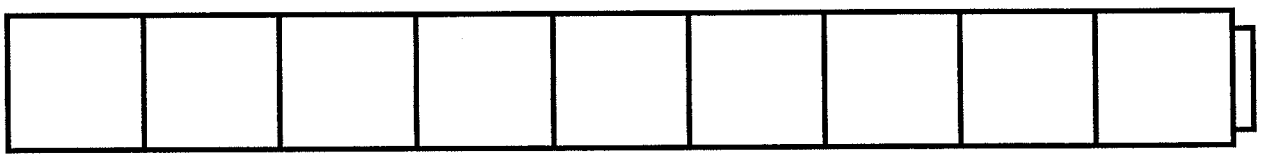


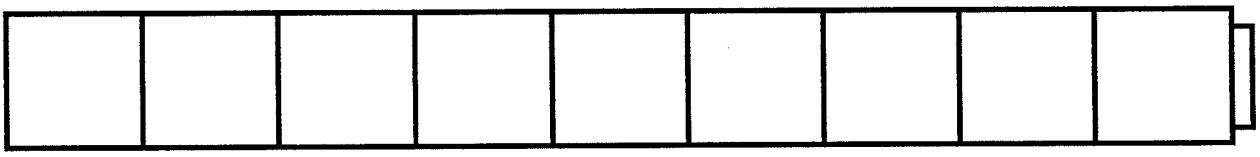


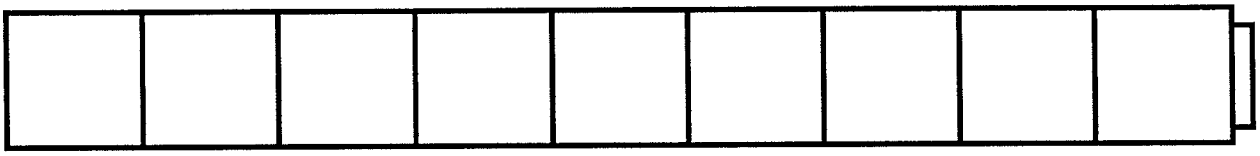


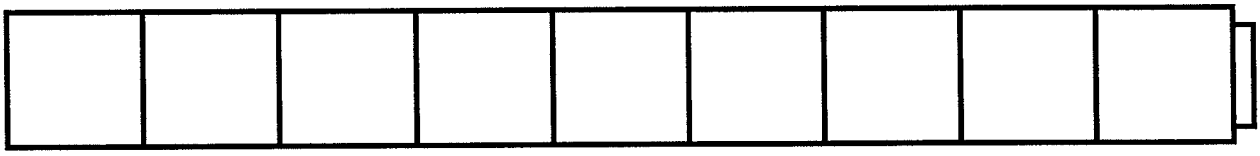


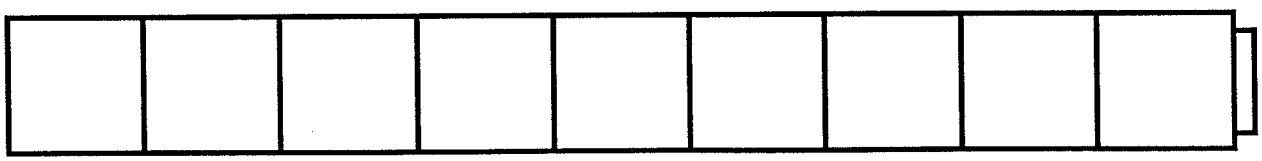


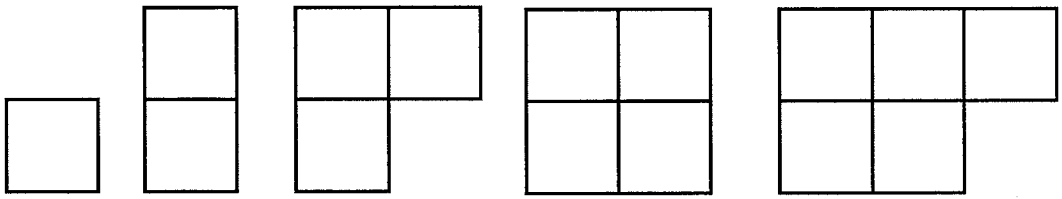


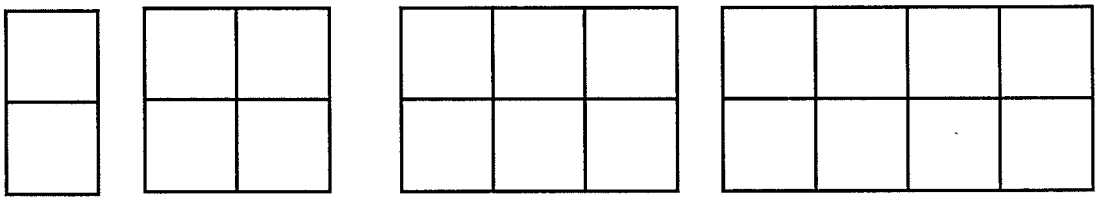


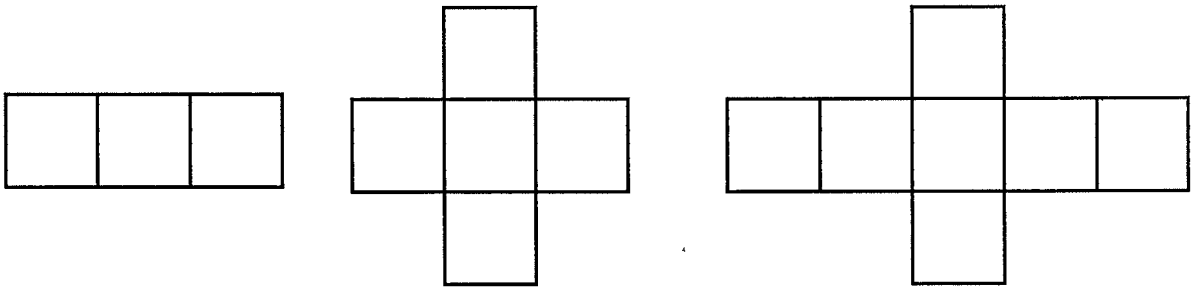


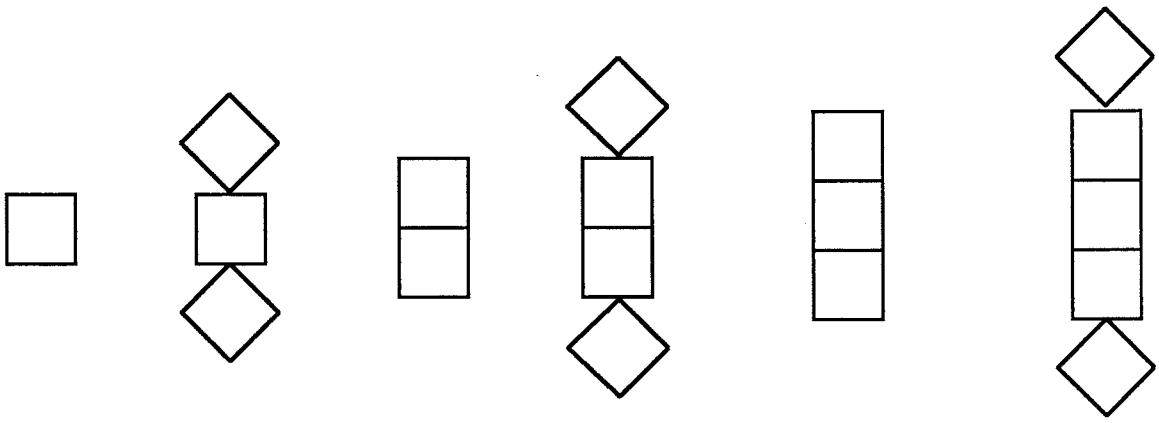


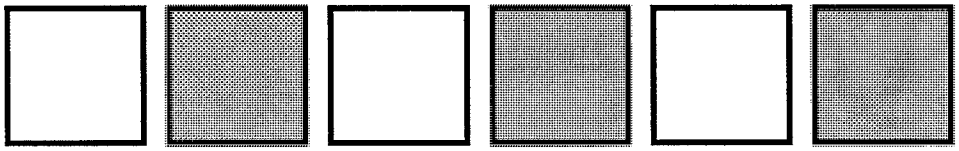


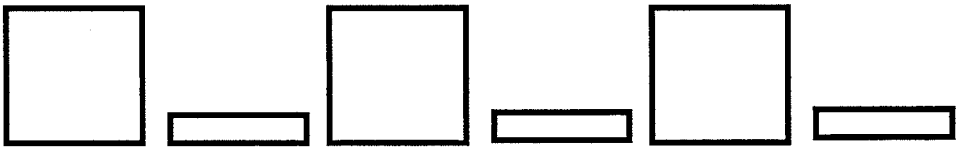


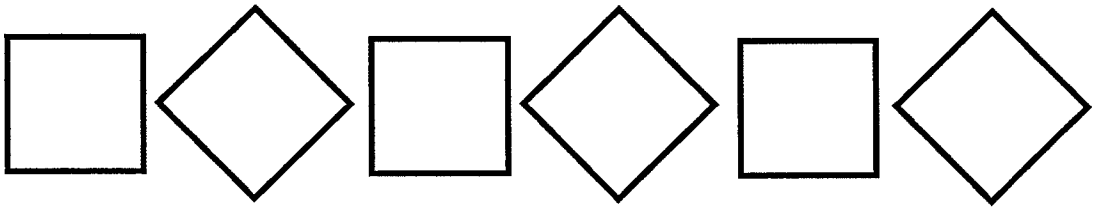


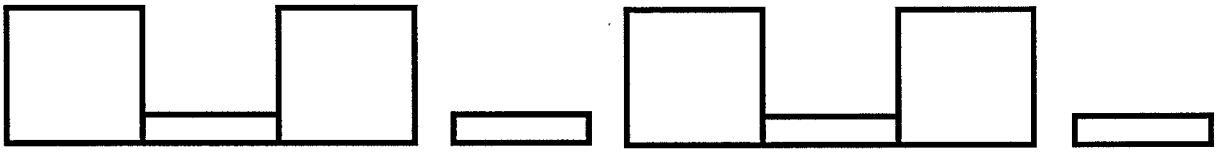


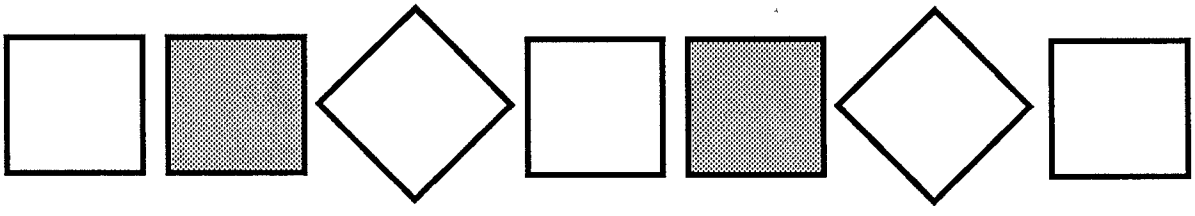


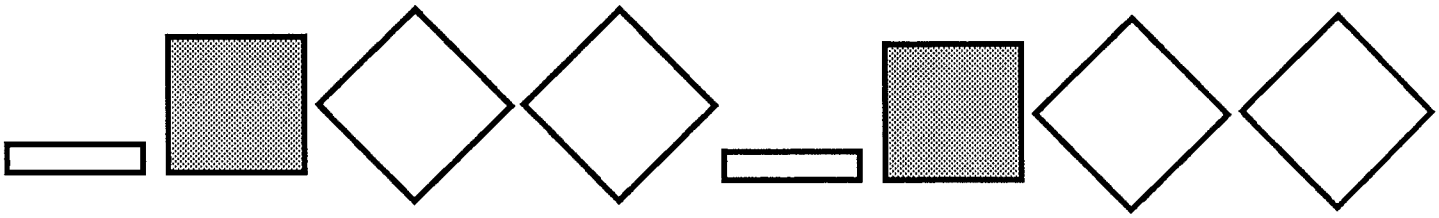












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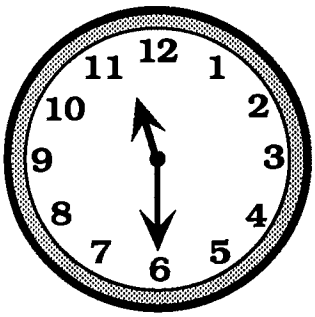

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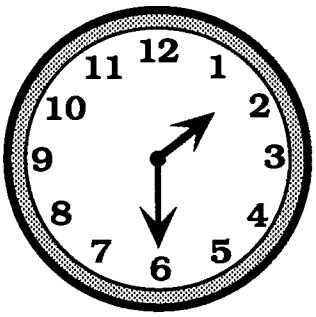

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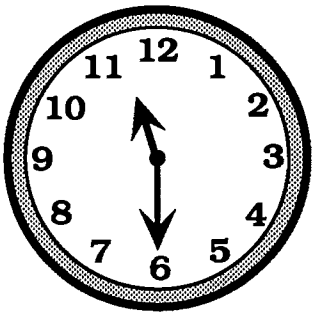

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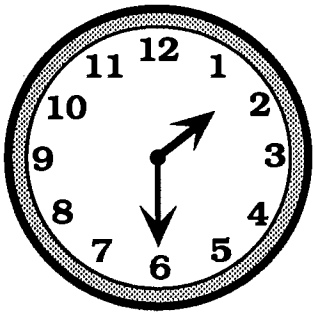

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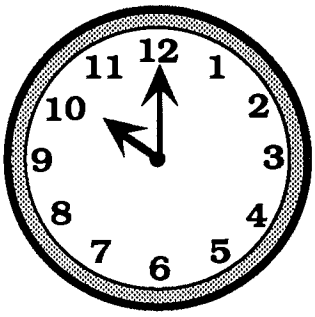

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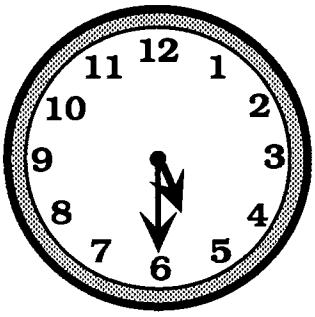

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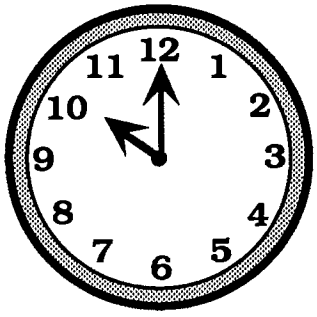

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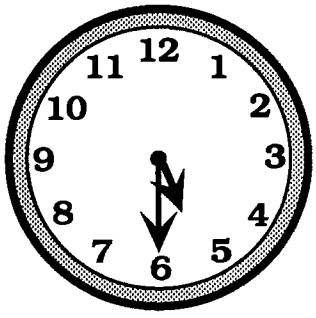

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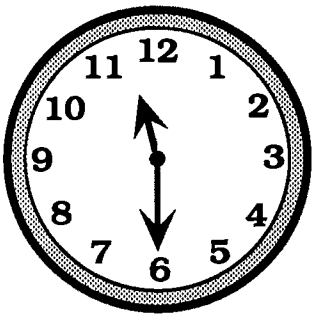

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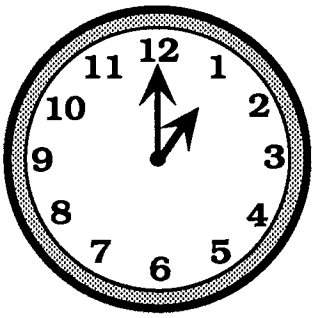

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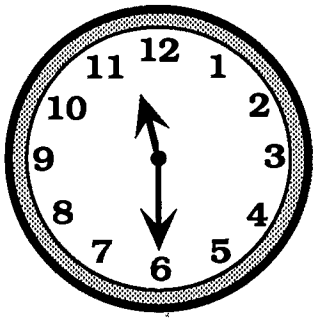

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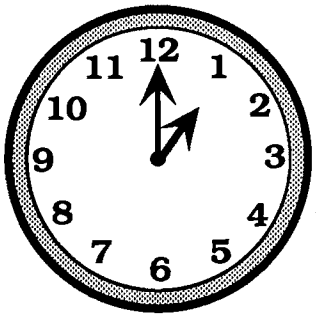

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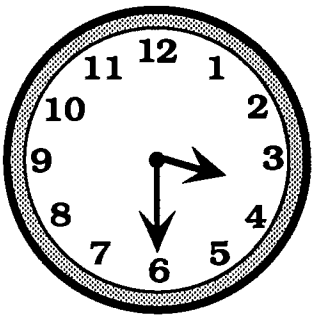

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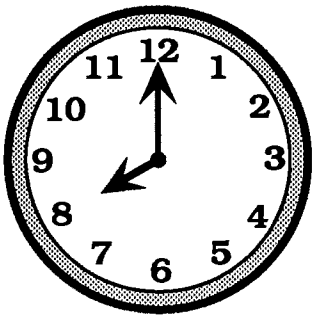

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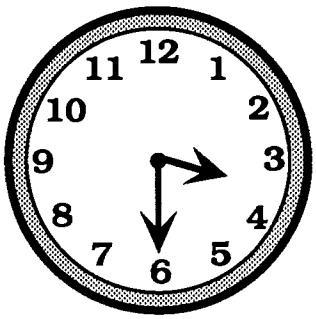

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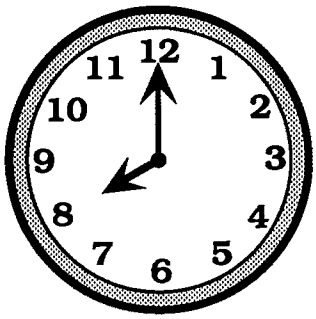

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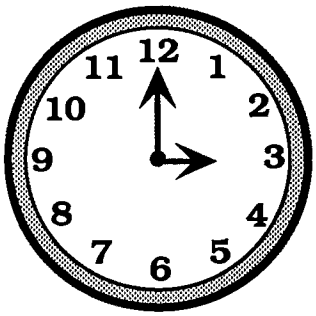

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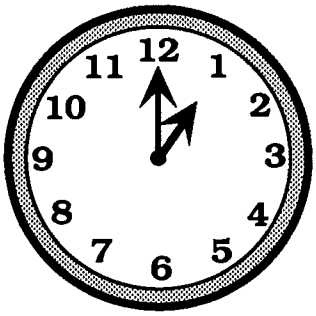

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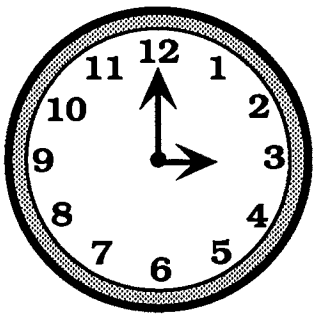

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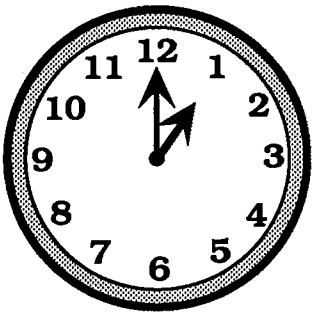

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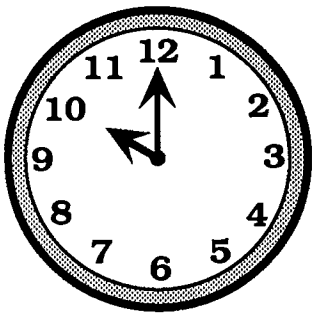

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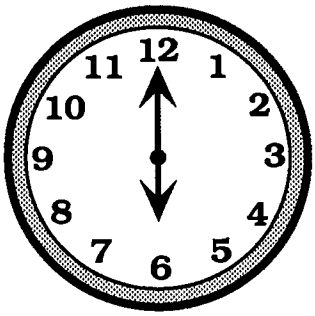

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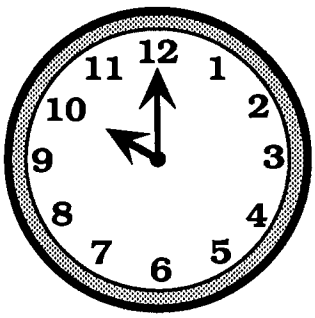

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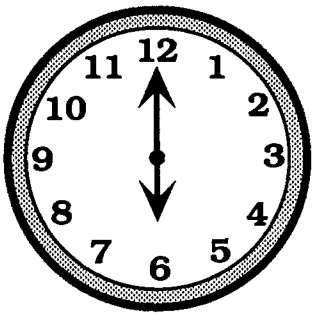

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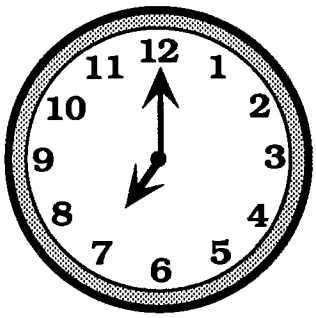

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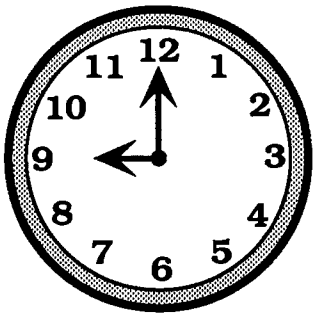

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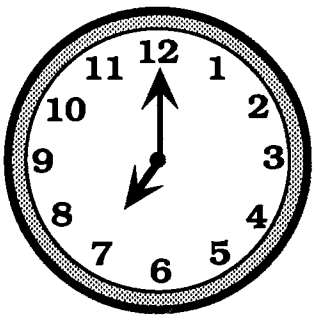

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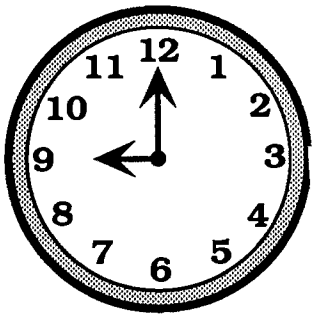

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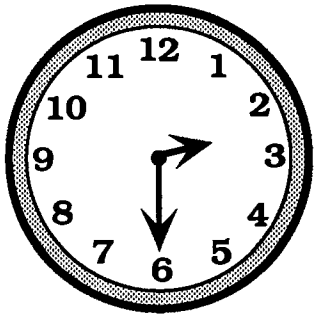

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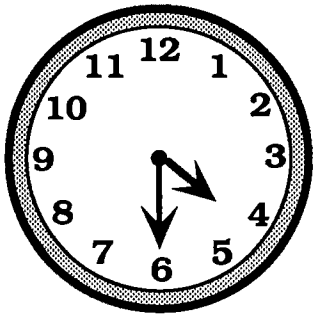

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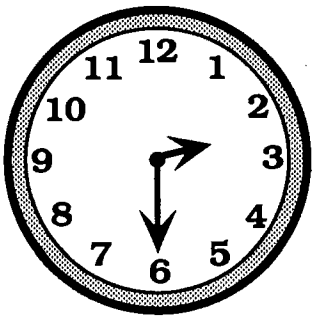

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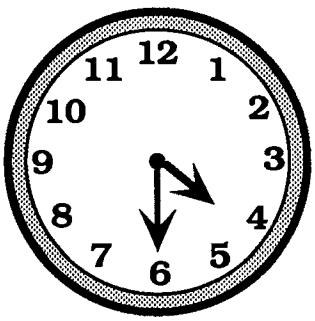
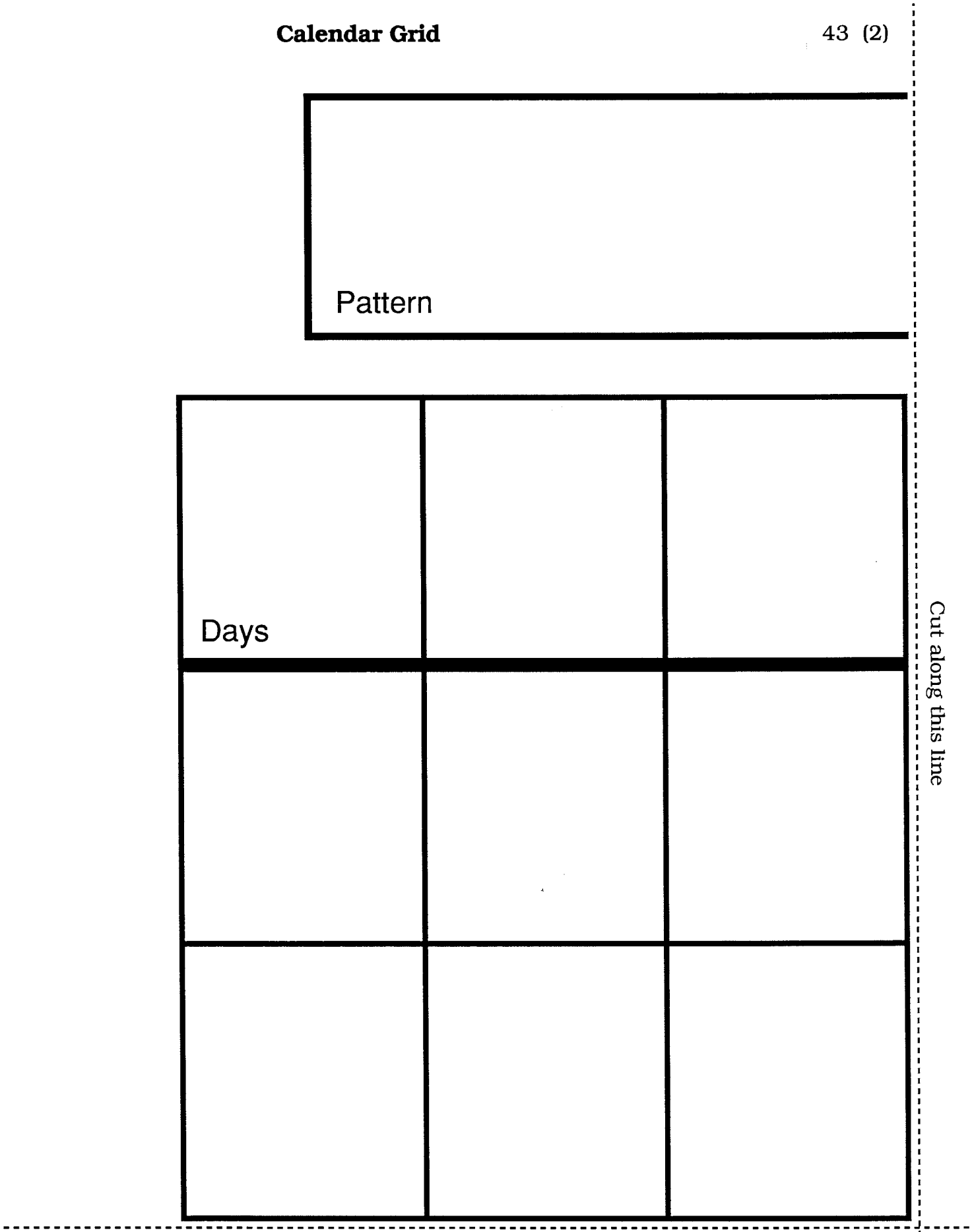
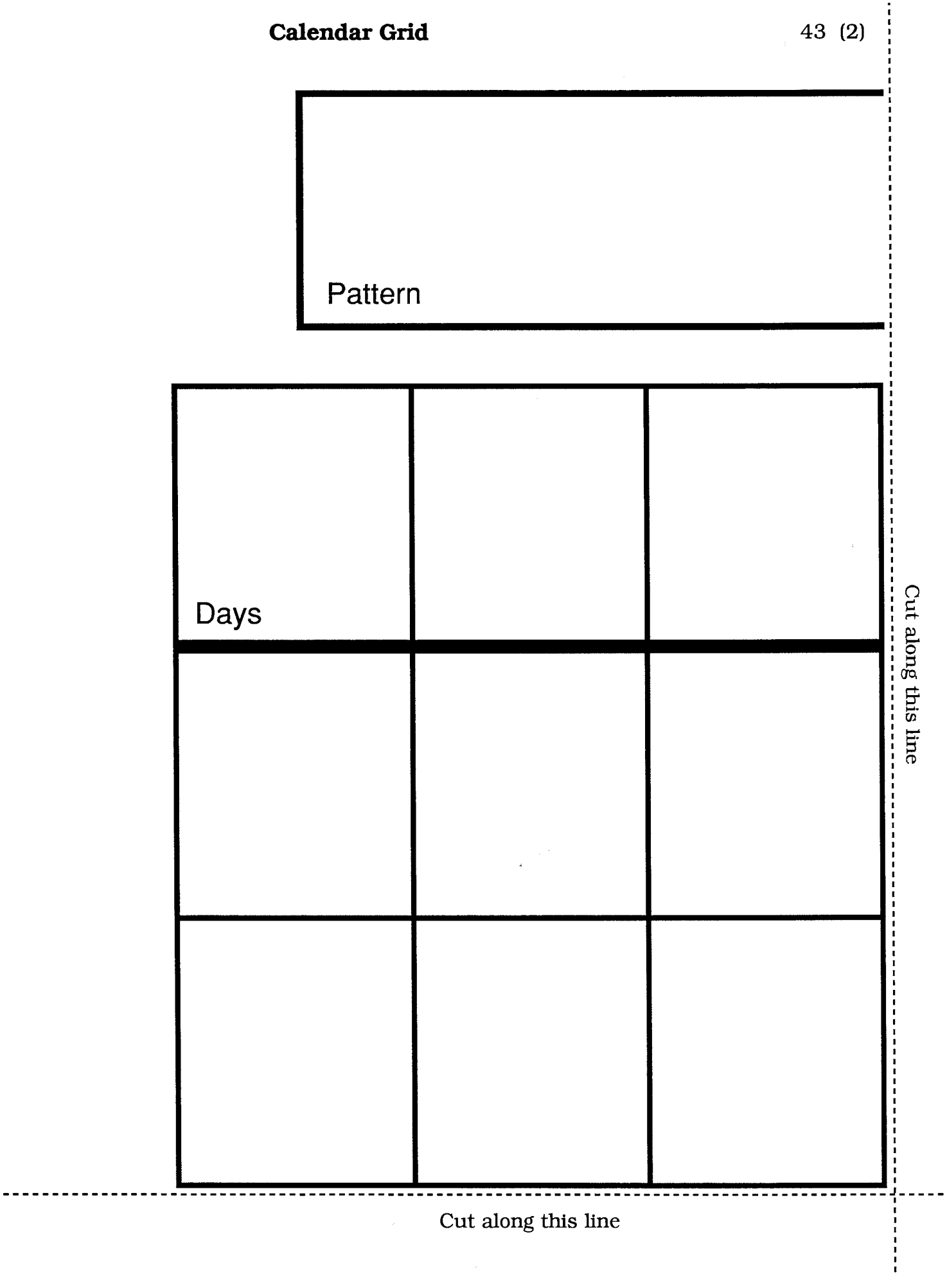


4:30

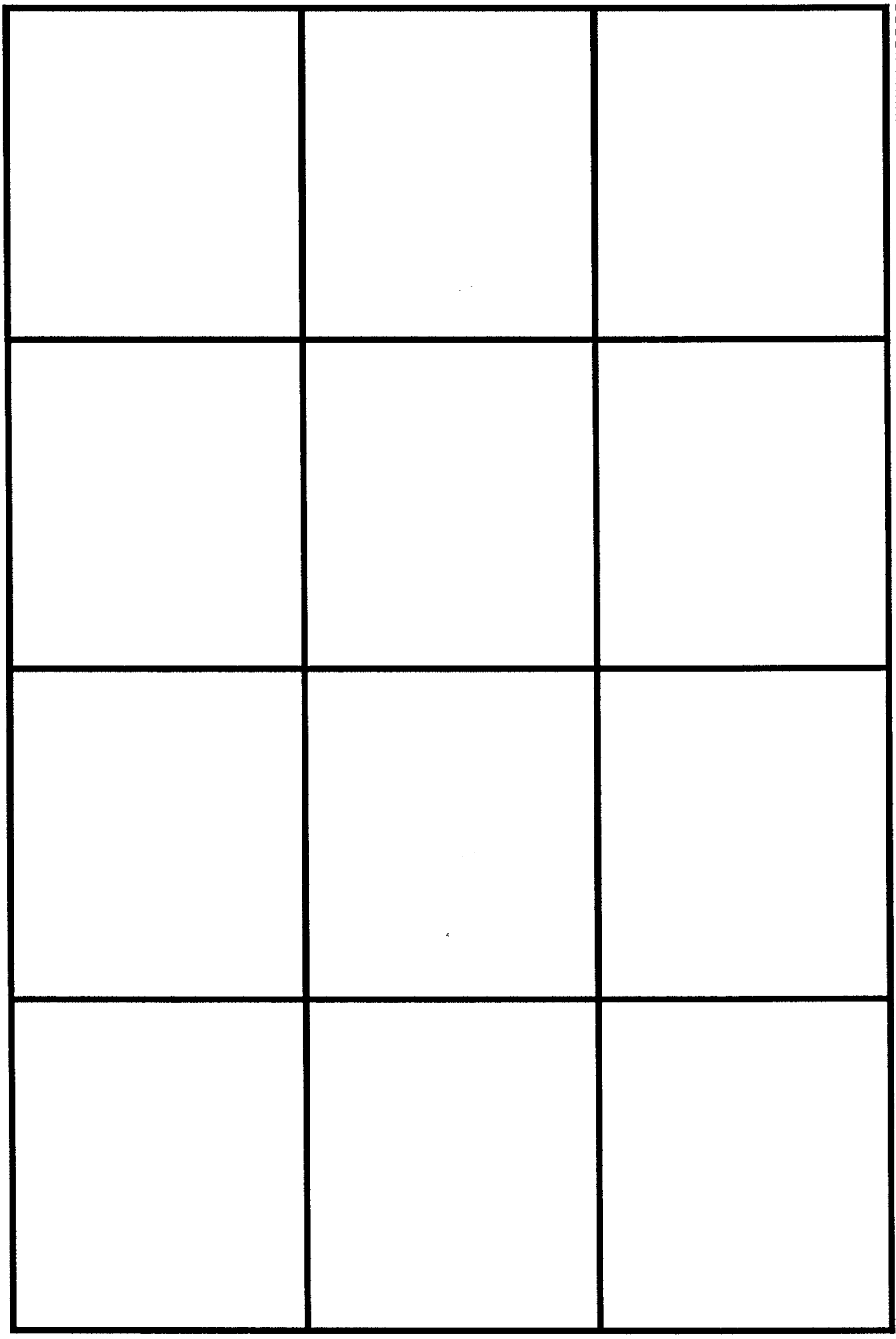
Calendar Grid




Pattern
Days
Cut along this line
Cut along this line

Calendar Grid

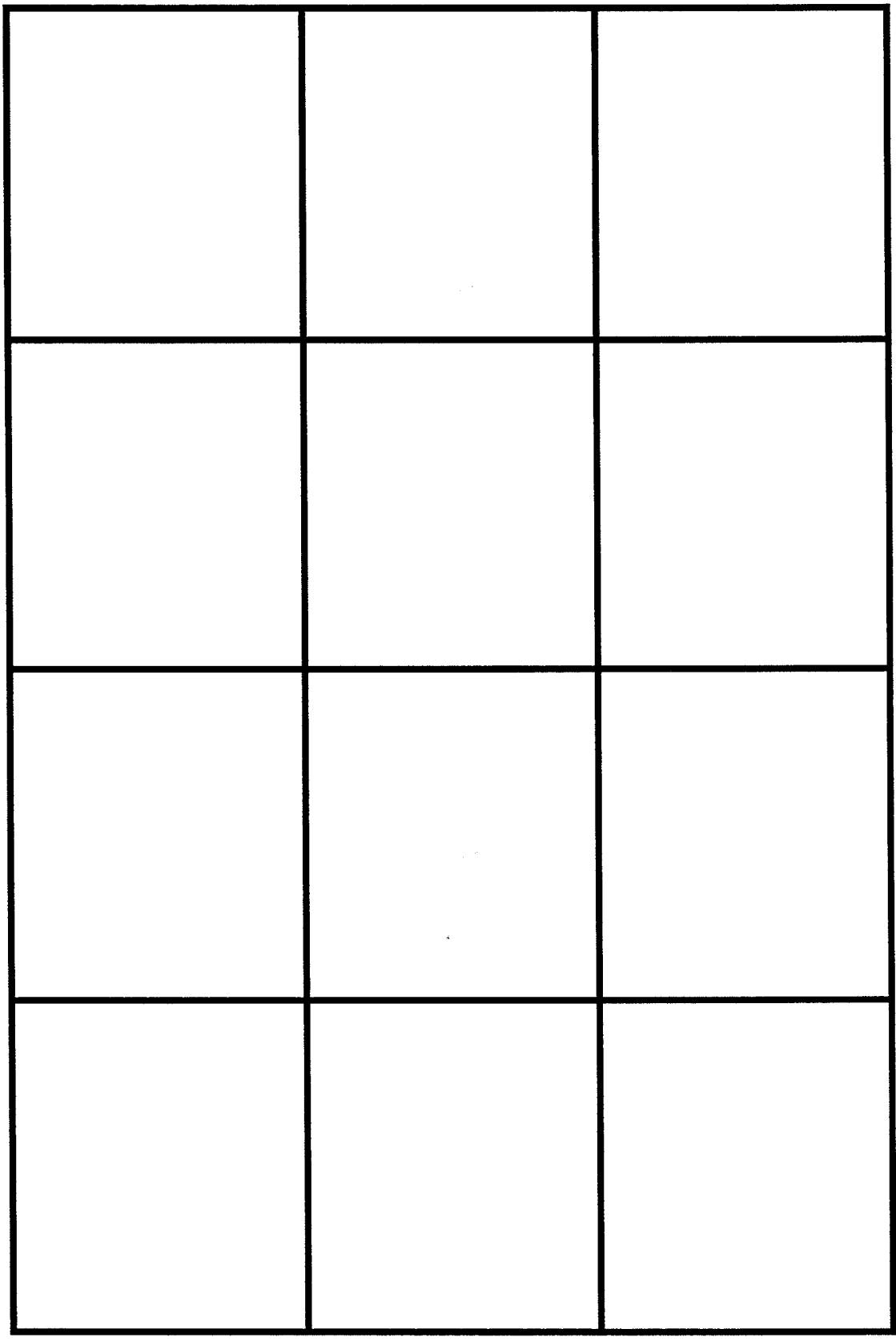
Cut along this line



Cut along this line

Calendar Grid

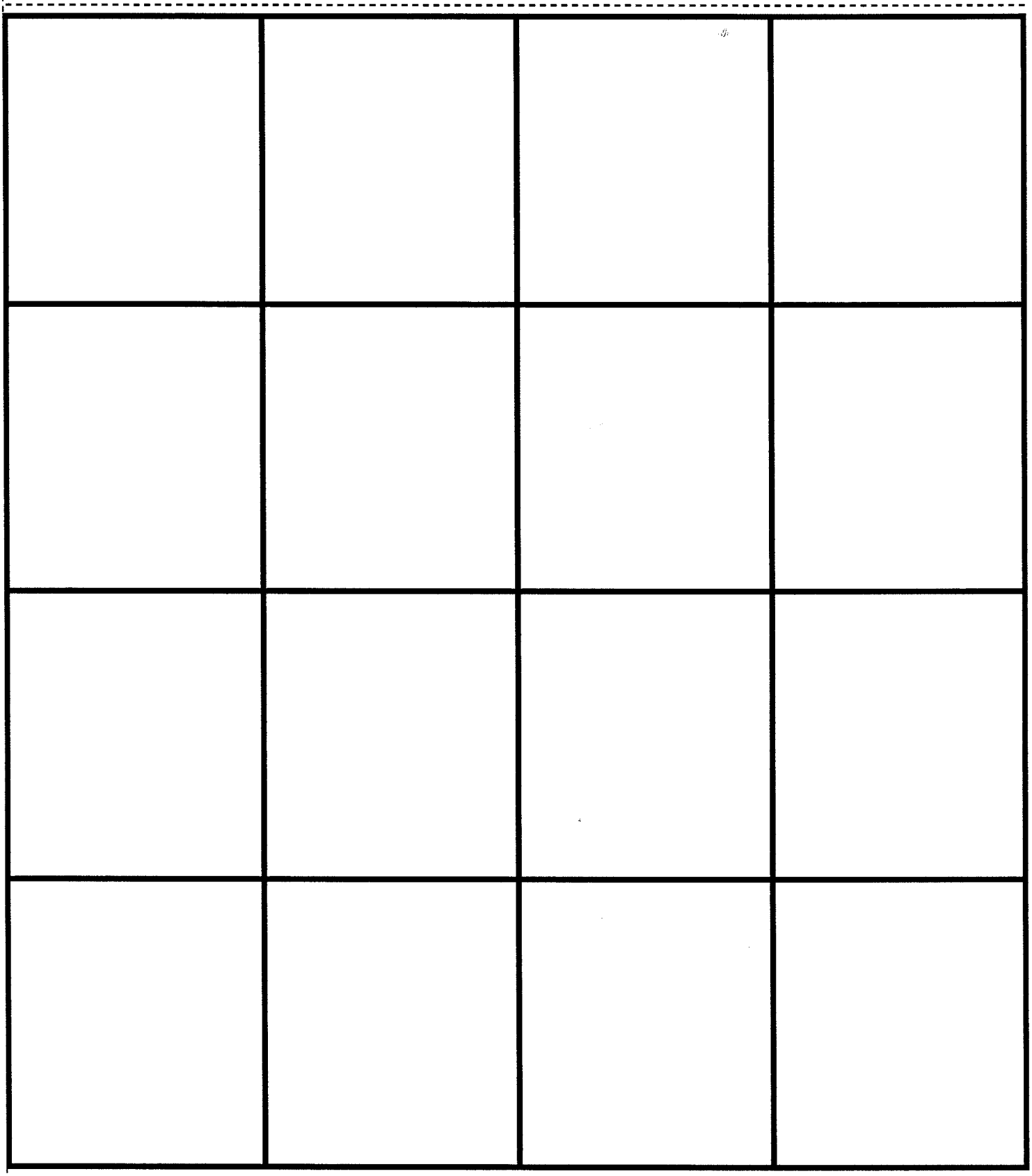
Cut along this line



Cut along this line

Calendar Grid

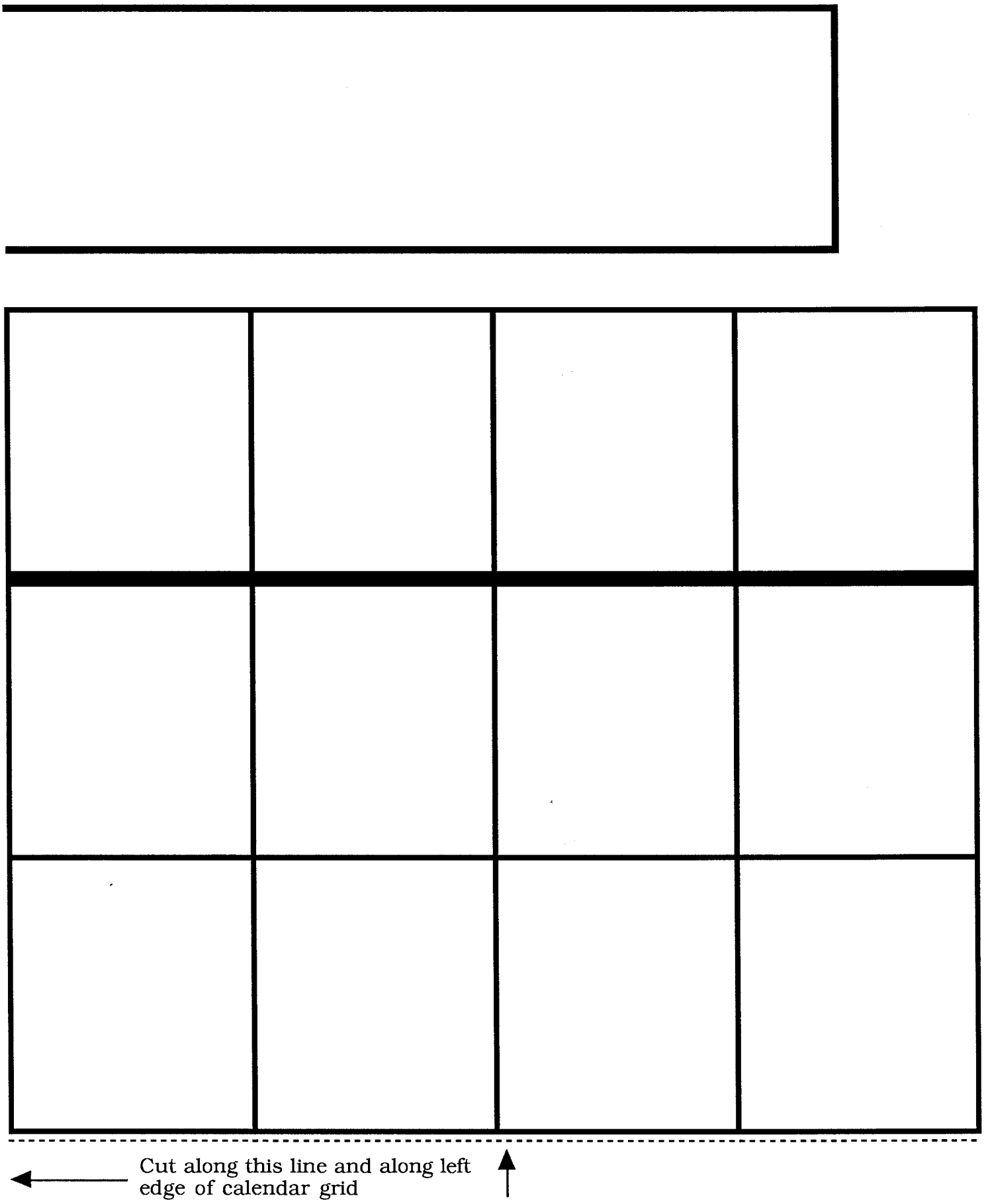
Cut along dotted lines



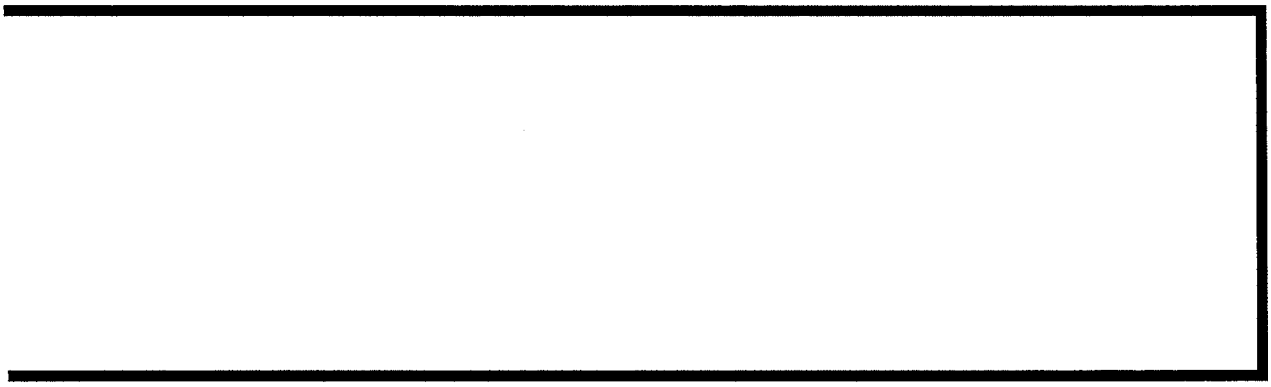
Calendar Grid

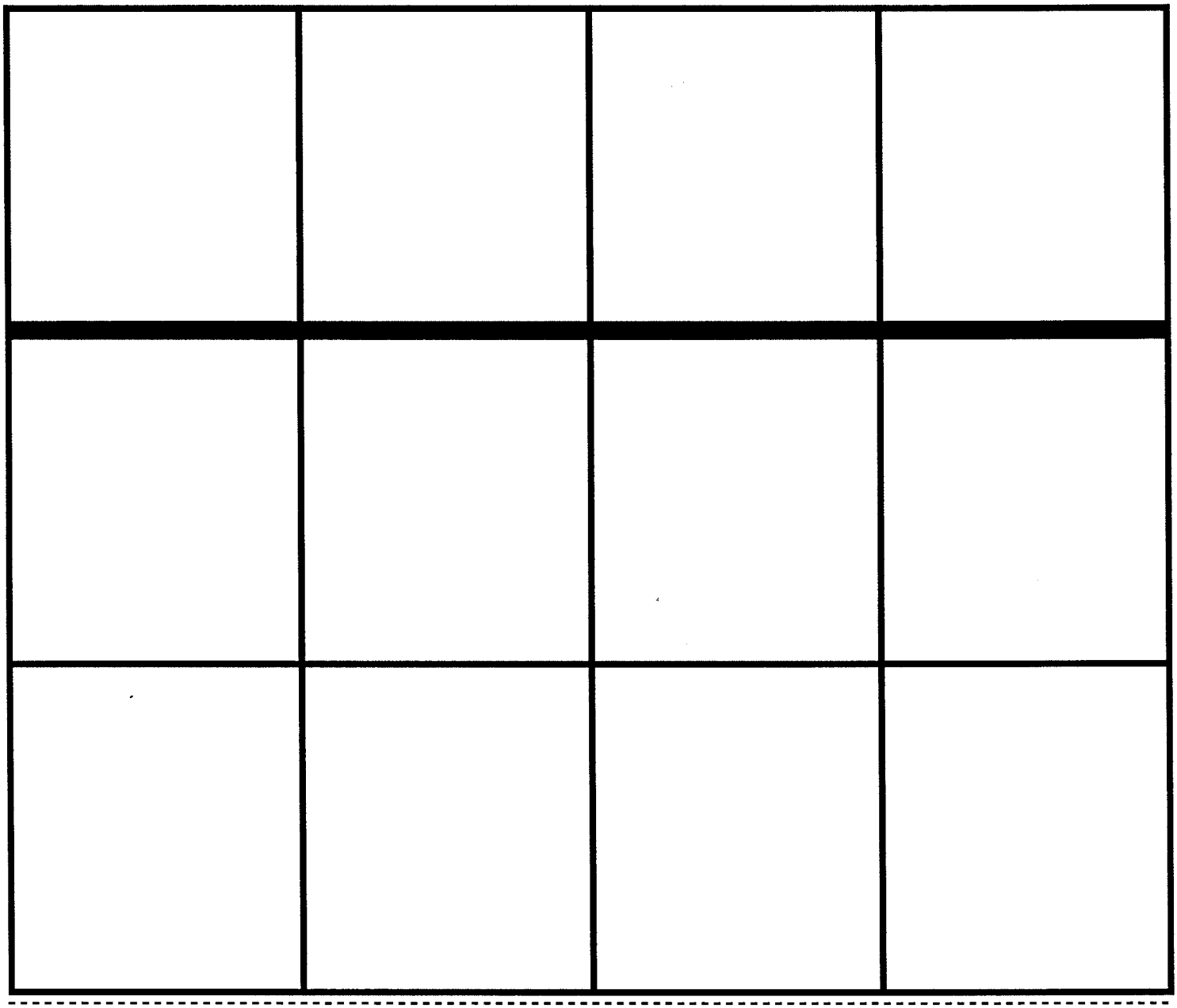
Cut along dotted lines

Calendar Grid

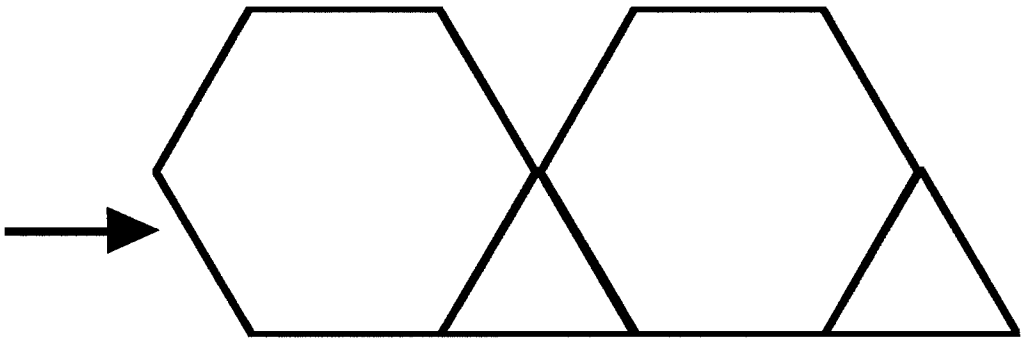


Calendar Grid



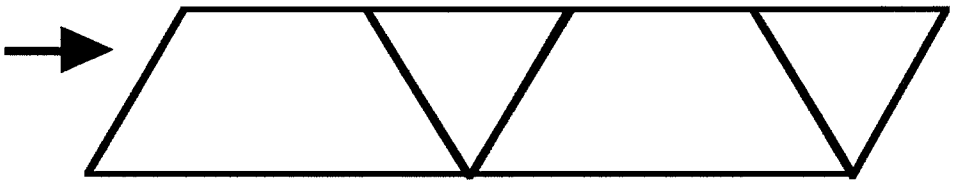


Cut along this line and along left edge of calendar grid



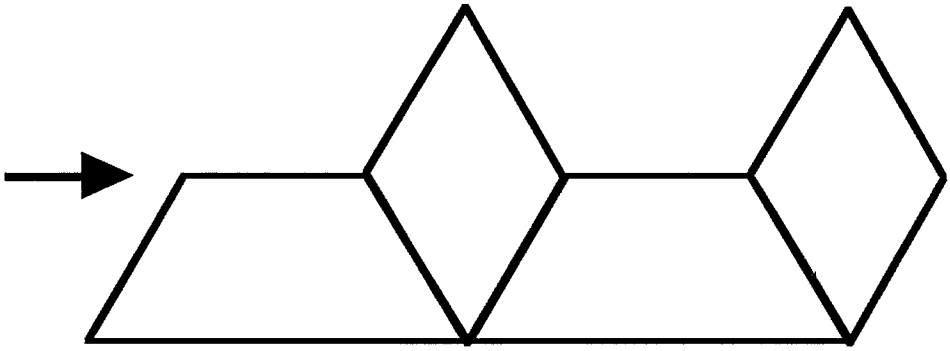
hexagon triangle hexagon triangle

etc.



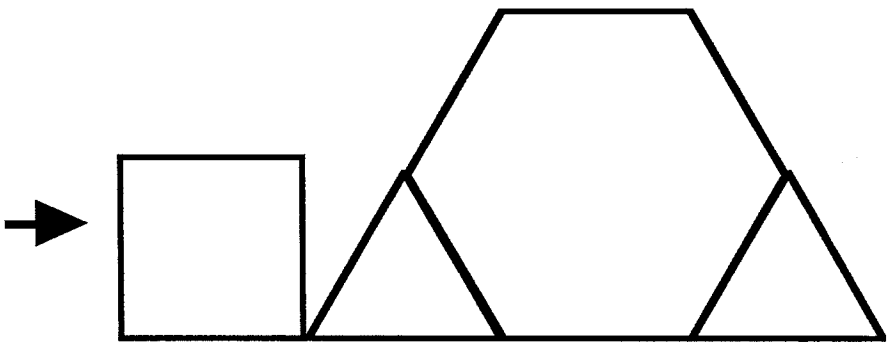
trapezoid triangle trapezoid triangle

etc.



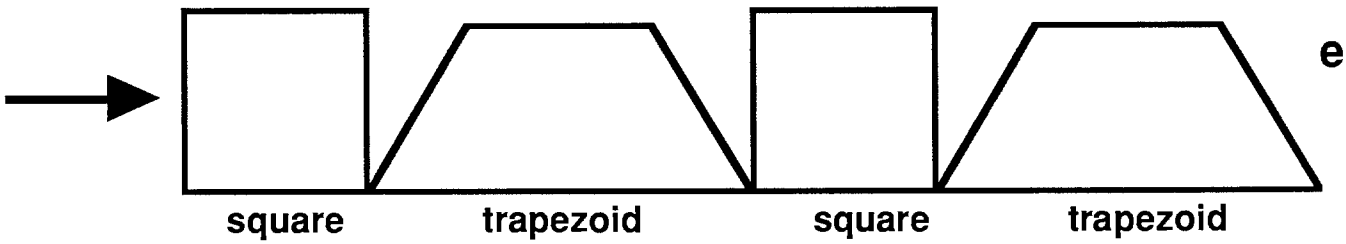
trapezoid diamond trapezoid diamond

etc.

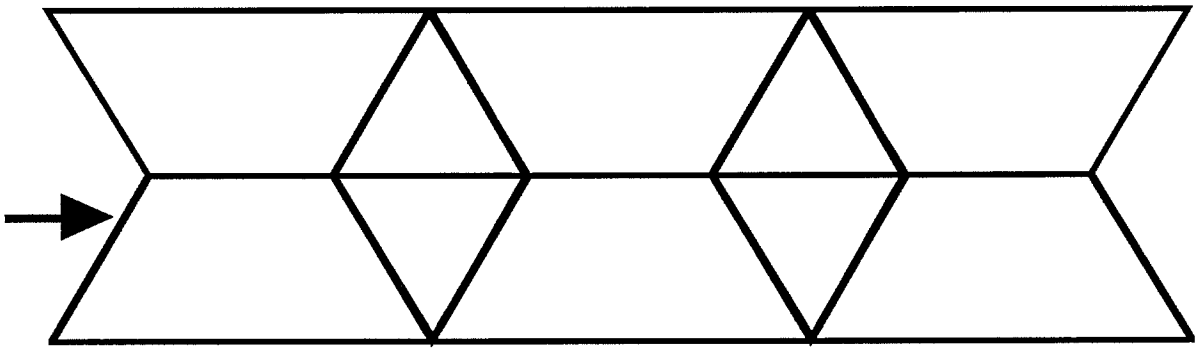


square triangle hexagon triangle

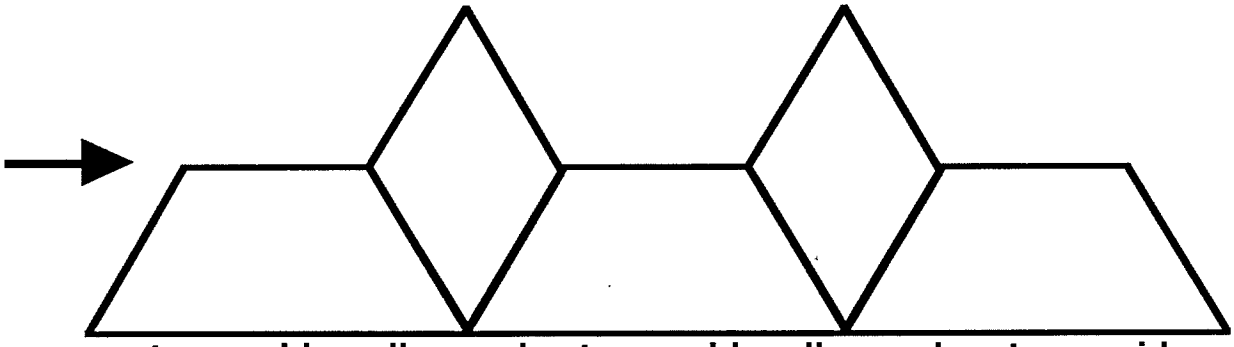
etc.



etc.



etc.



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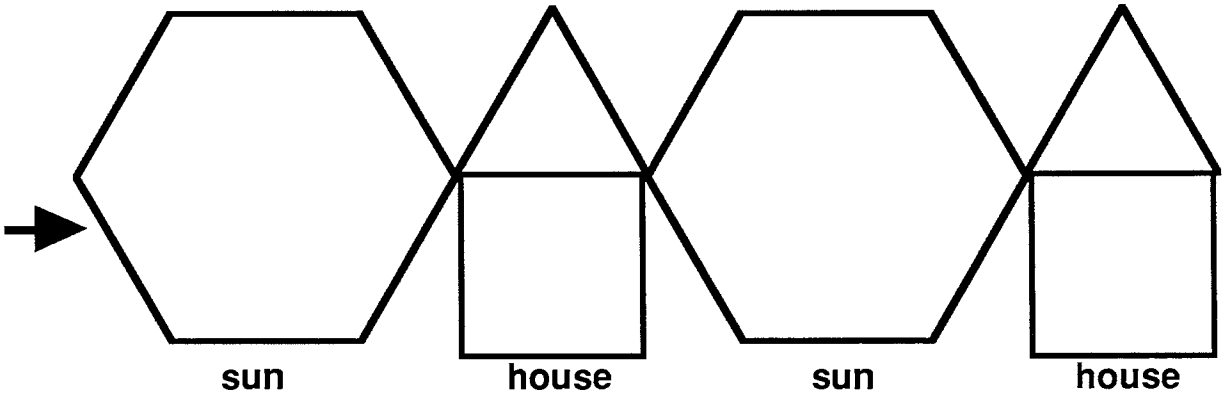
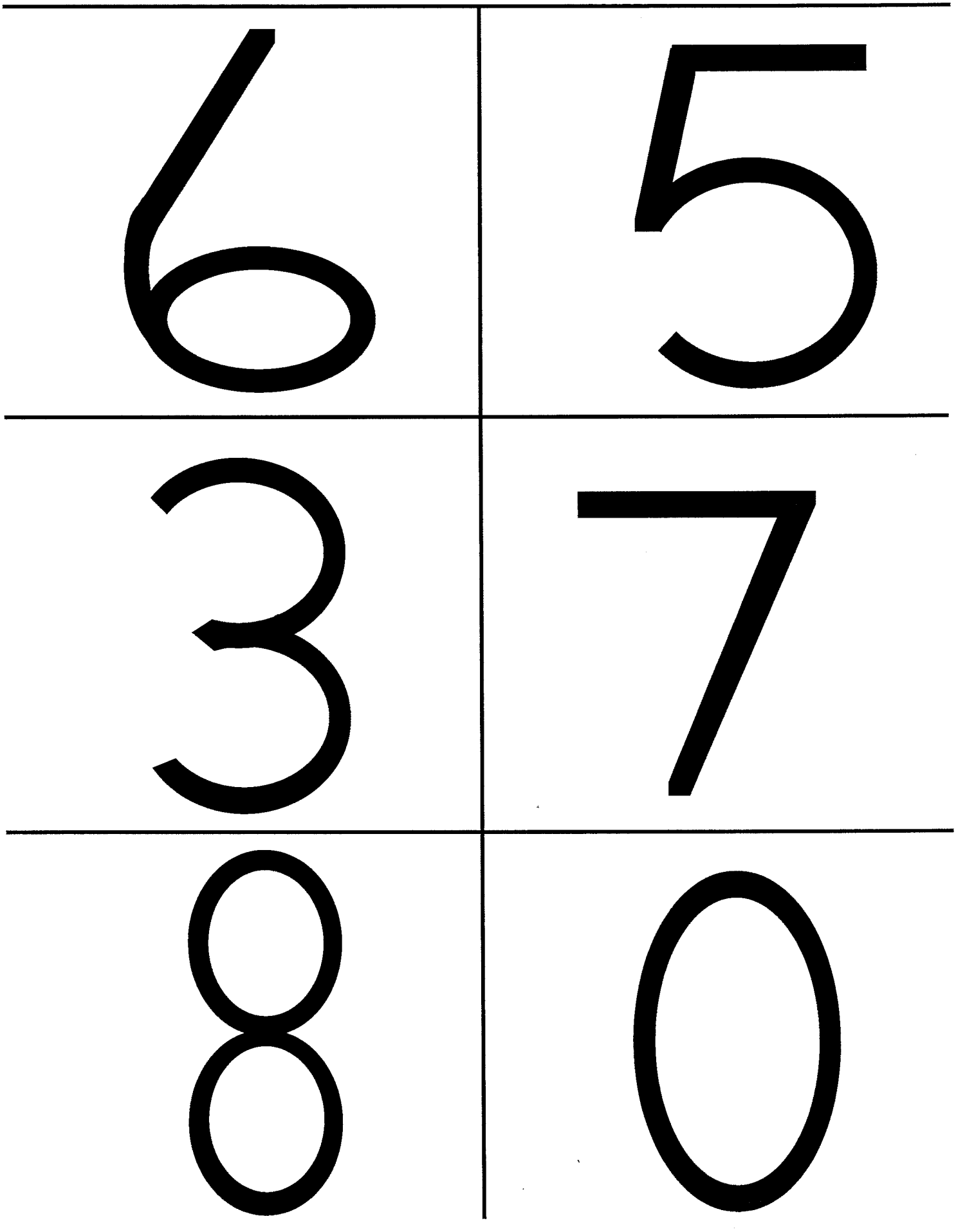
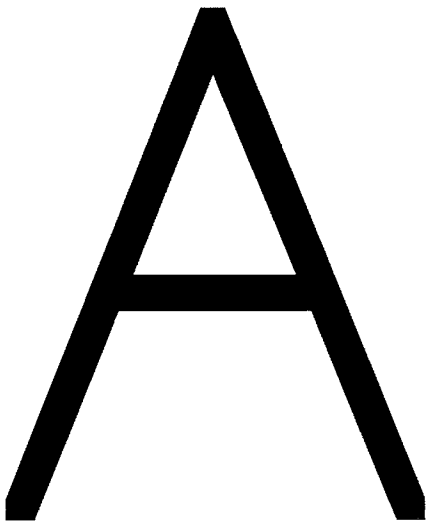
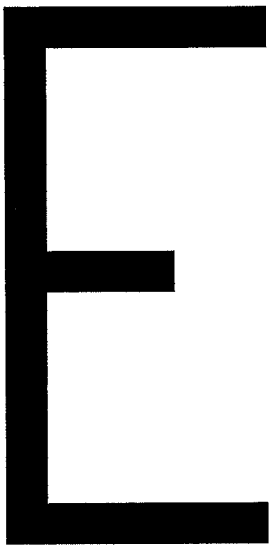
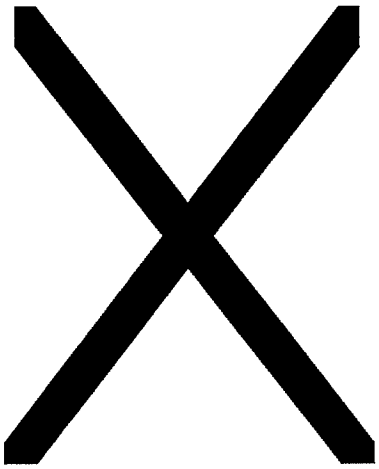


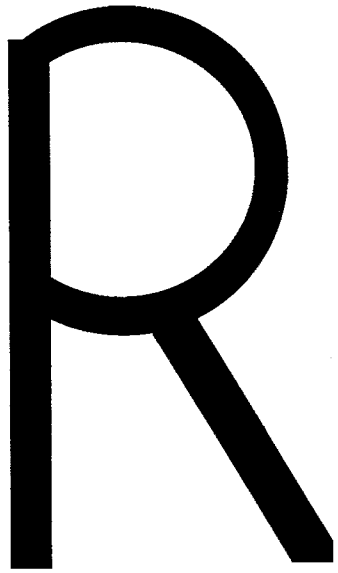
etc.

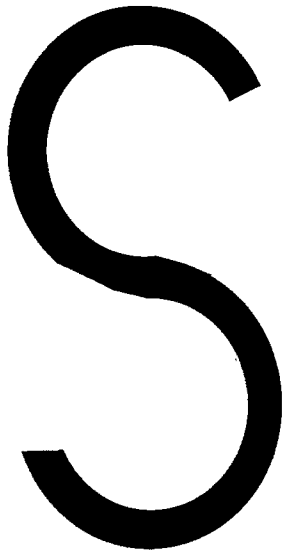

6
5
3
7
8
0

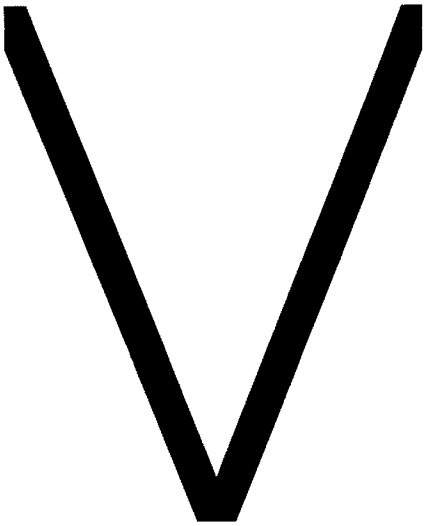






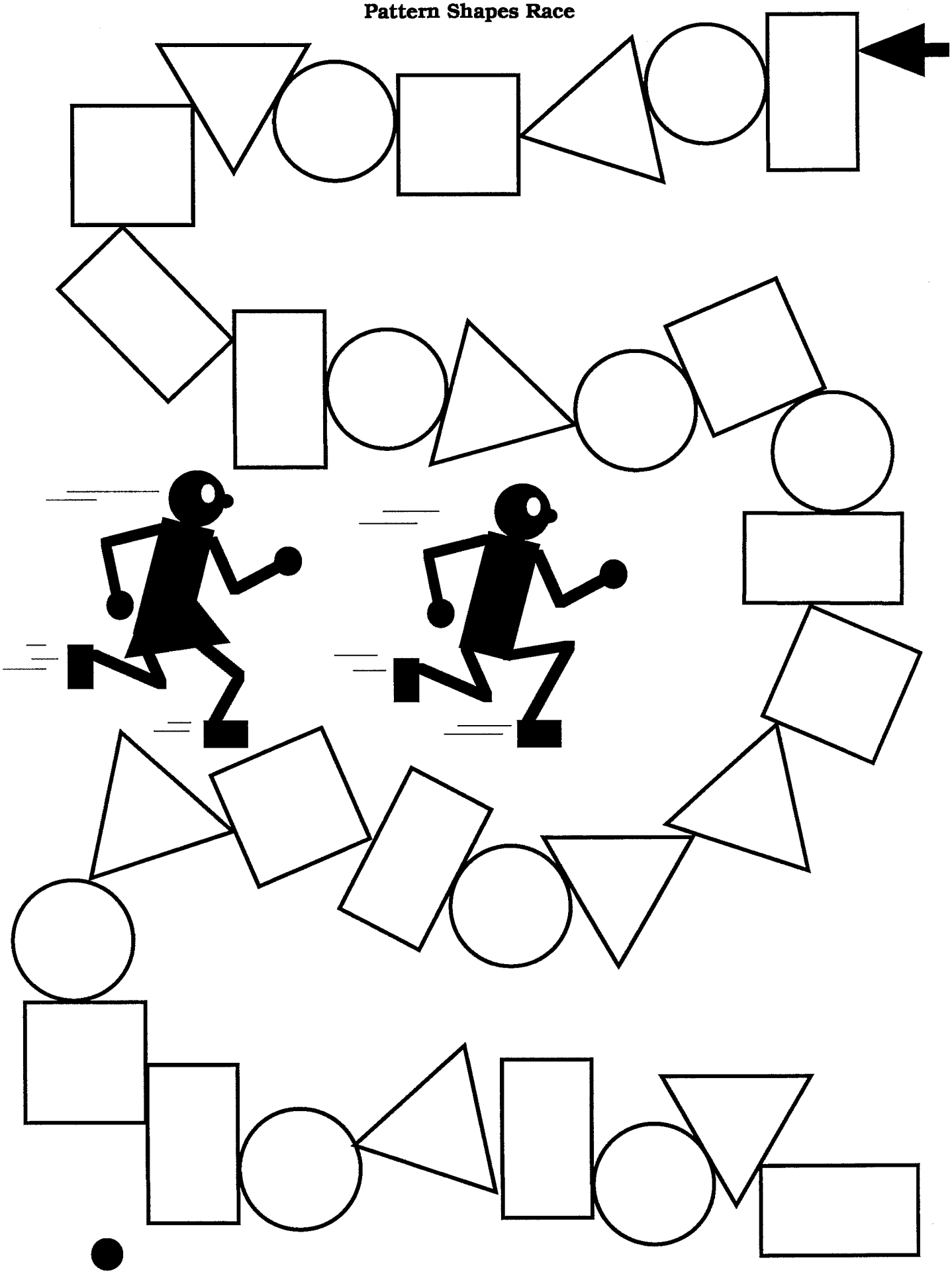


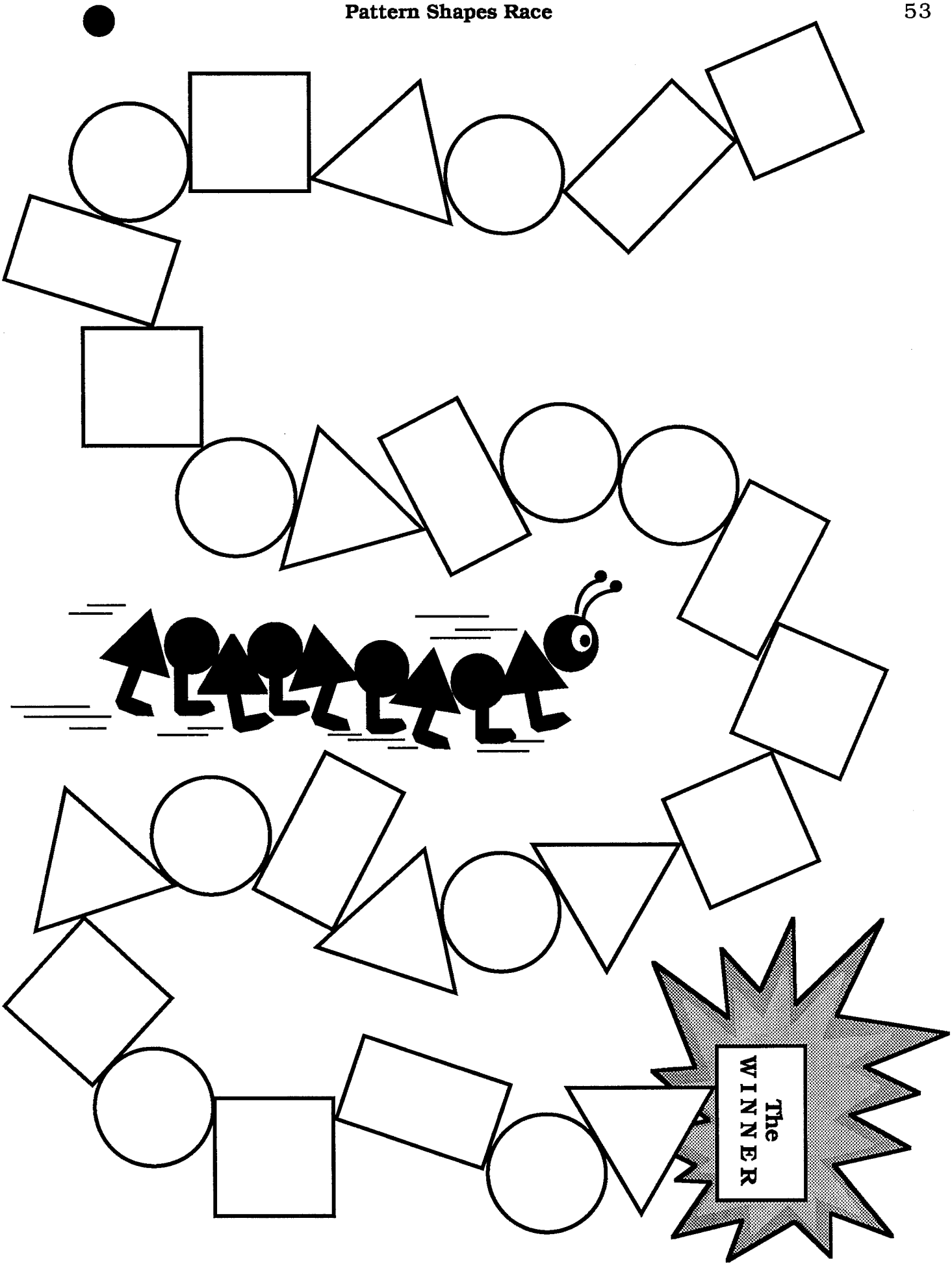


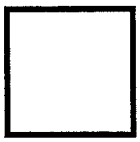
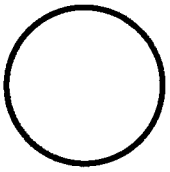


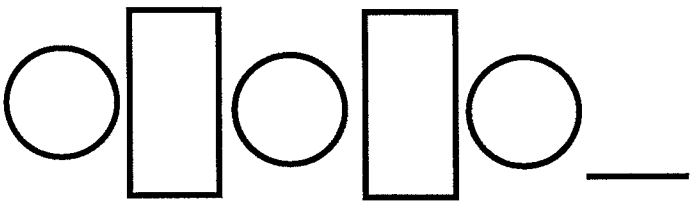
squishy
hard
not flat
flat
bumpy
smooth
curved
corners
scratchy
soft
not metal
metal
Soda
Soda
long
short
squishy
metal
flat

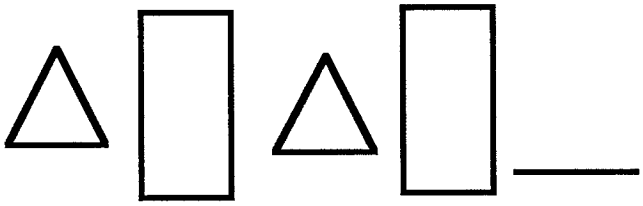
Pattern Shapes Race

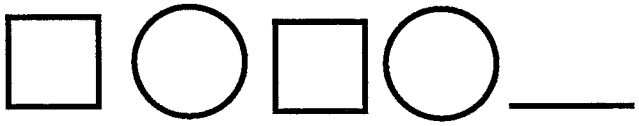


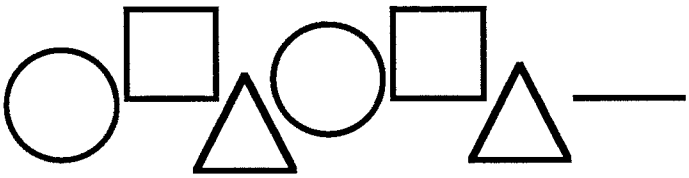

The
WINNER

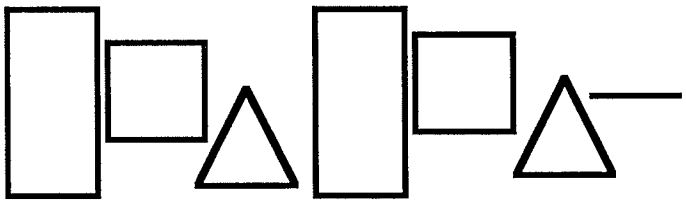
Get an extra turn 	Go back 2 shapes 
Move to the nearest 	Move to the nearest 
Go forward 1	Go back 1
Move to the nearest 	Move to the nearest 
Lose a turn 	Go forward 2
Go back 2	Go back 1

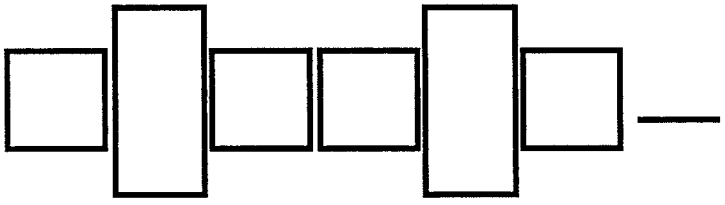


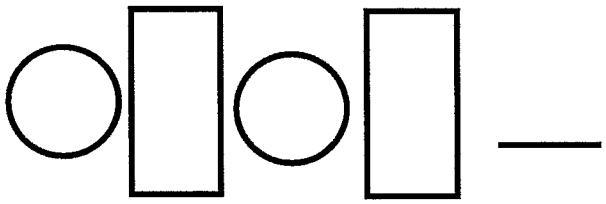
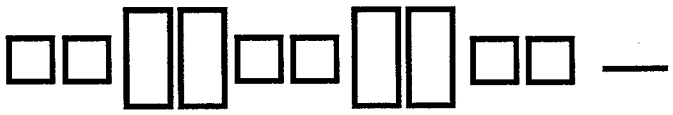
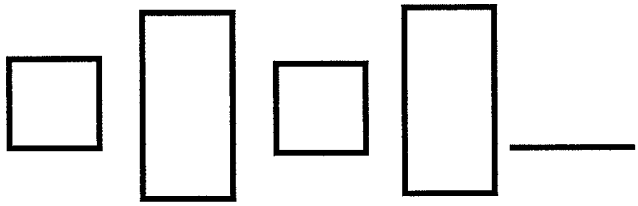
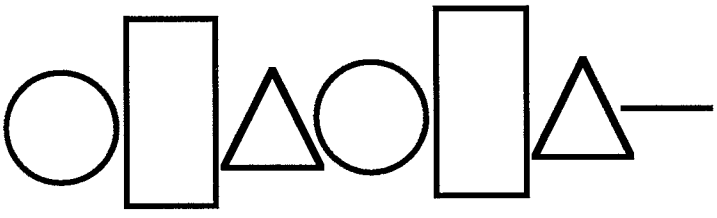




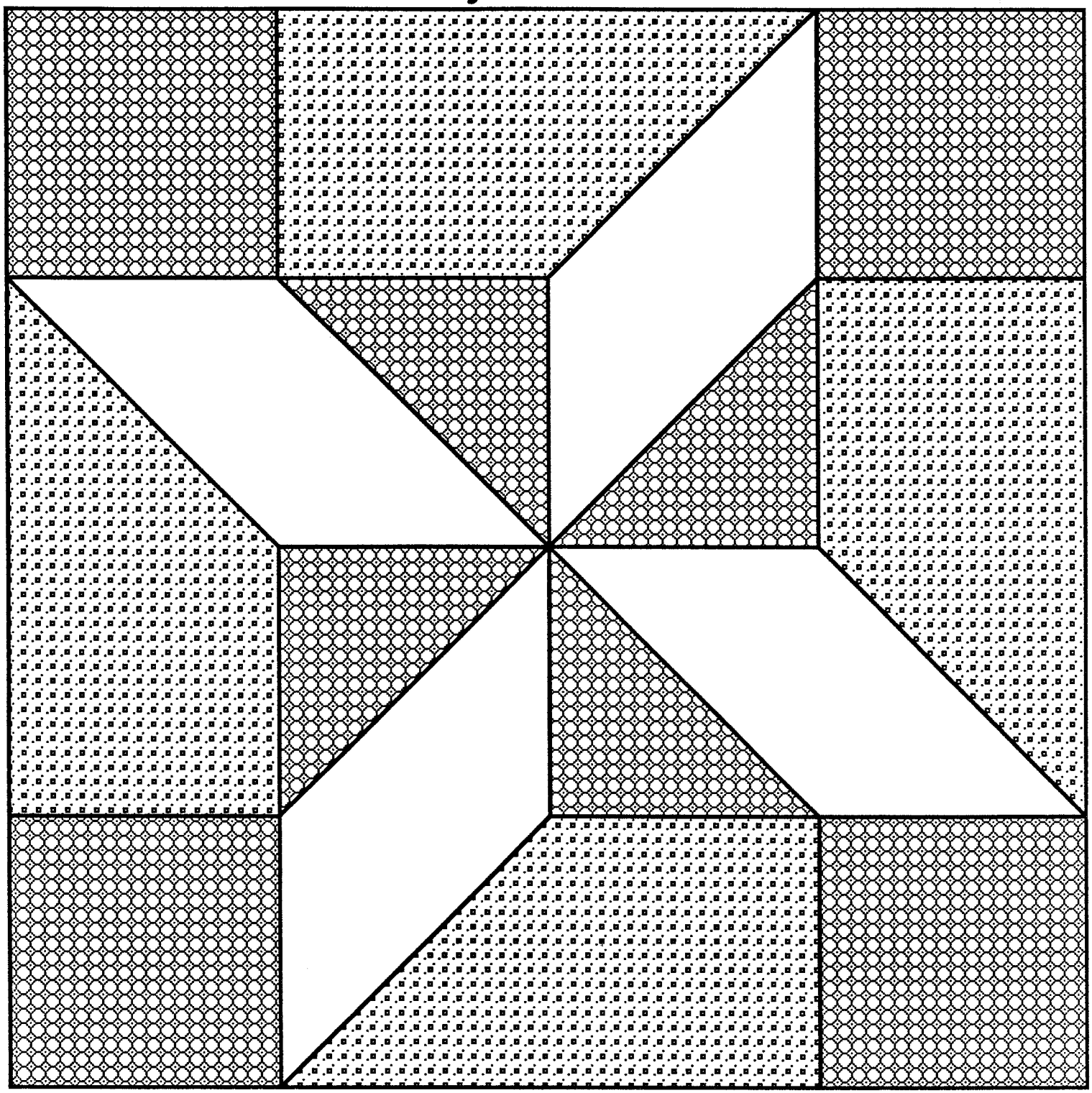


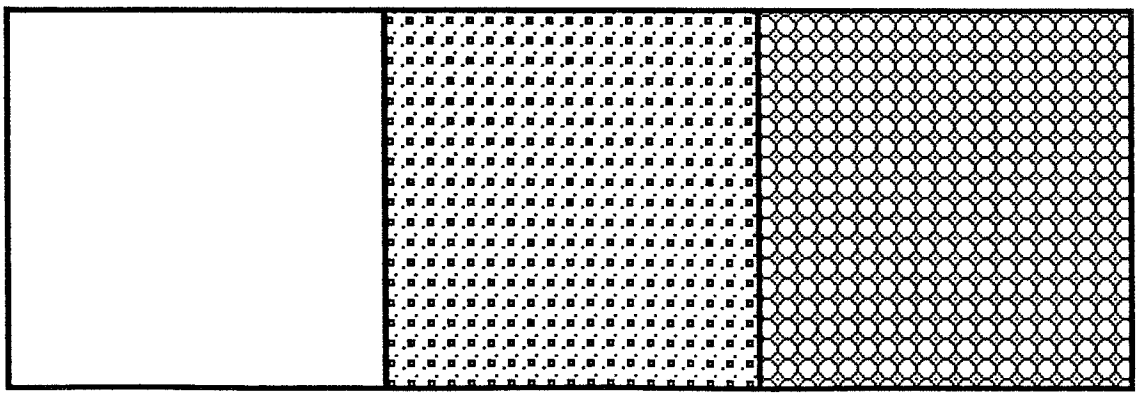




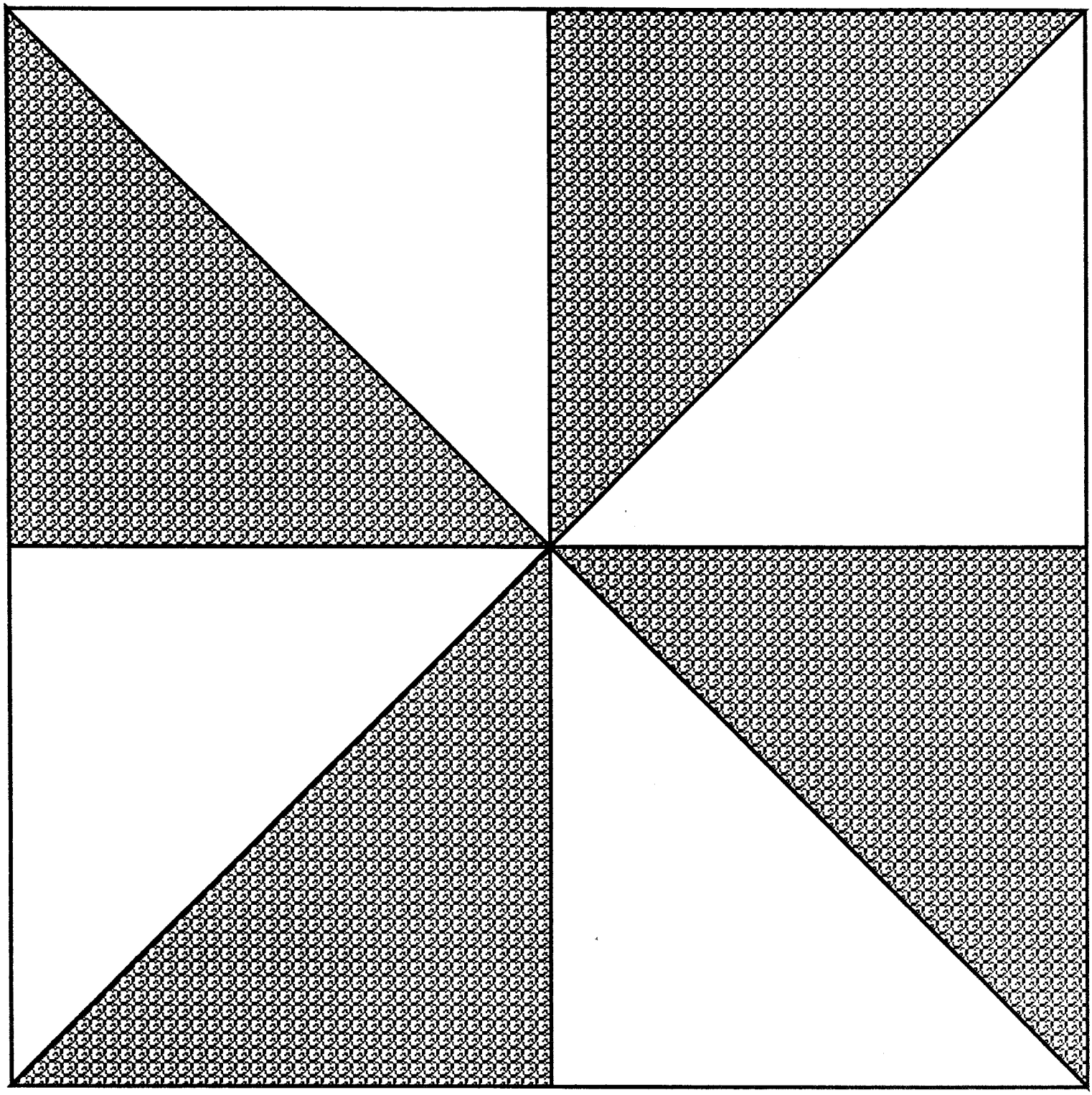
	
	
	
	
	
	

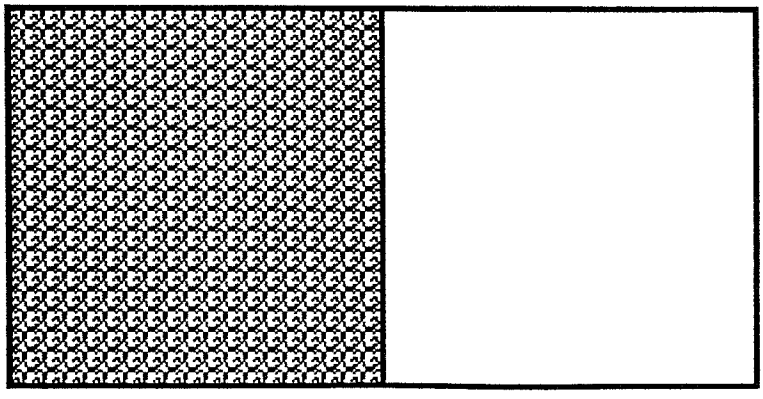
Clay's Choice



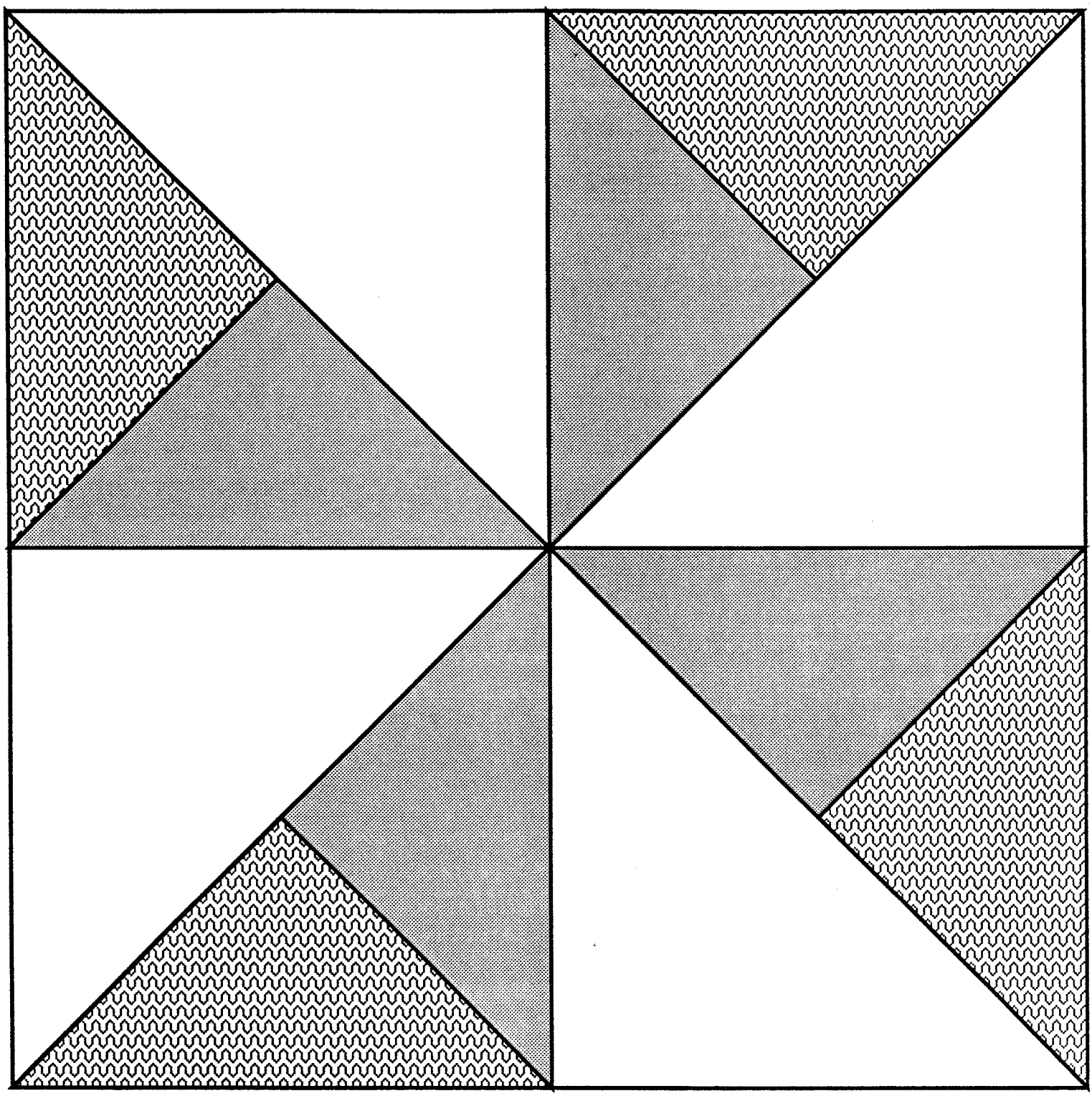


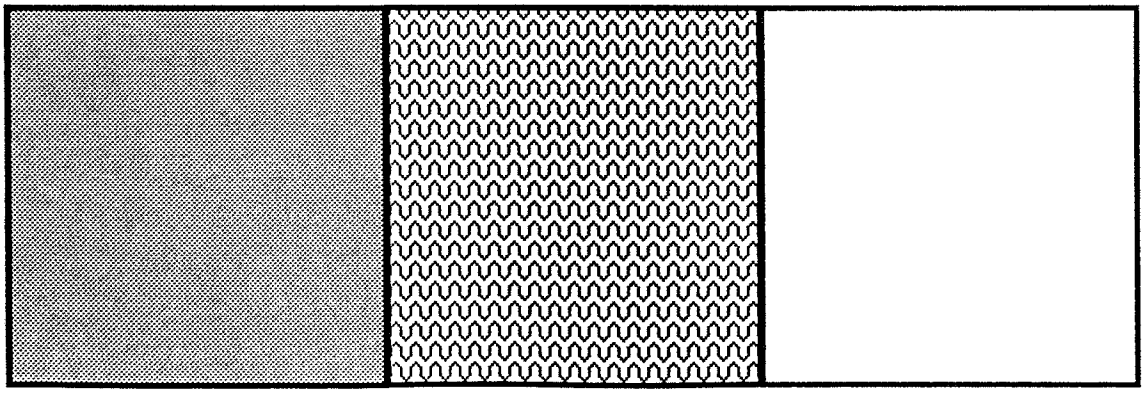
Windmill



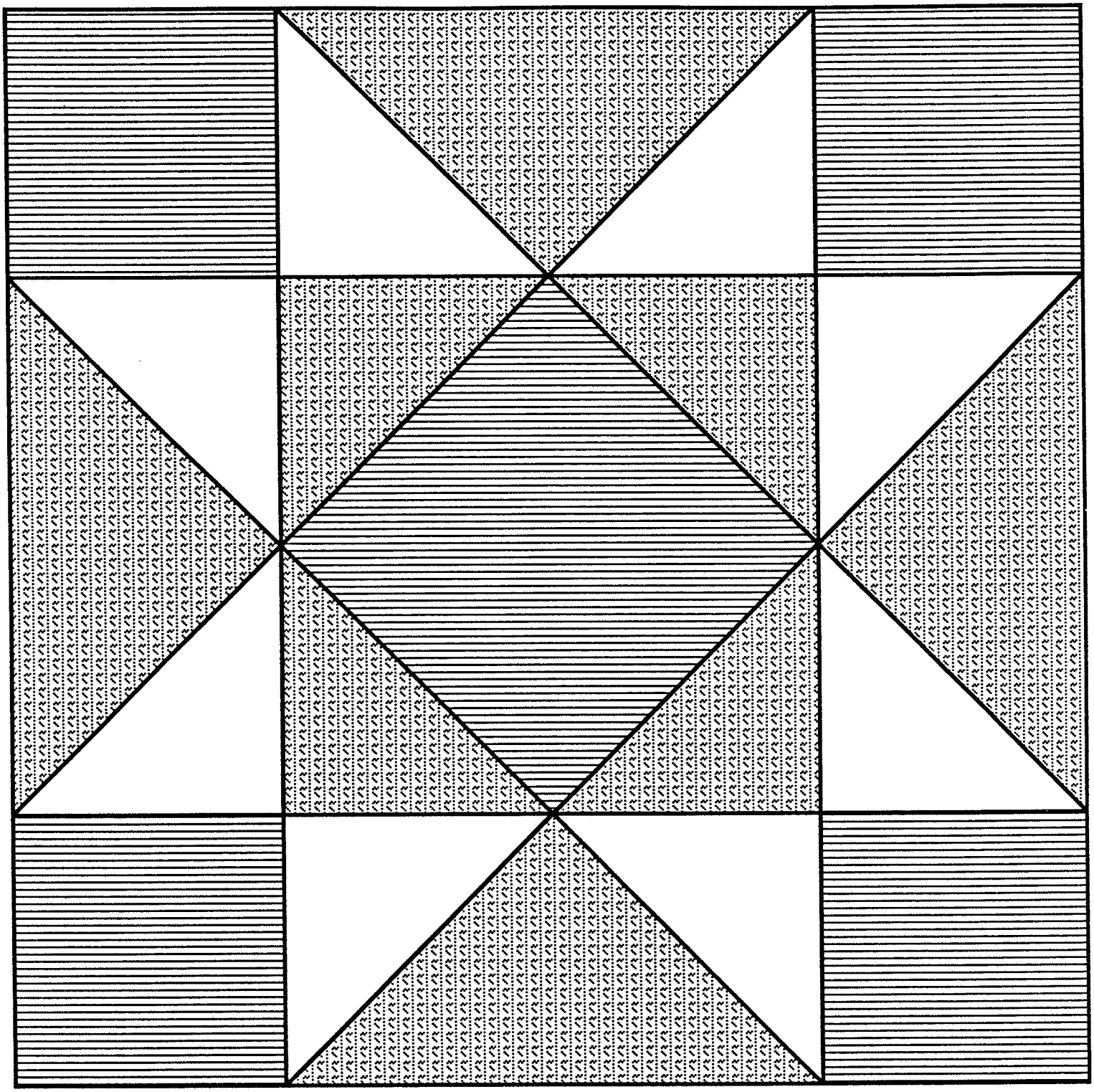


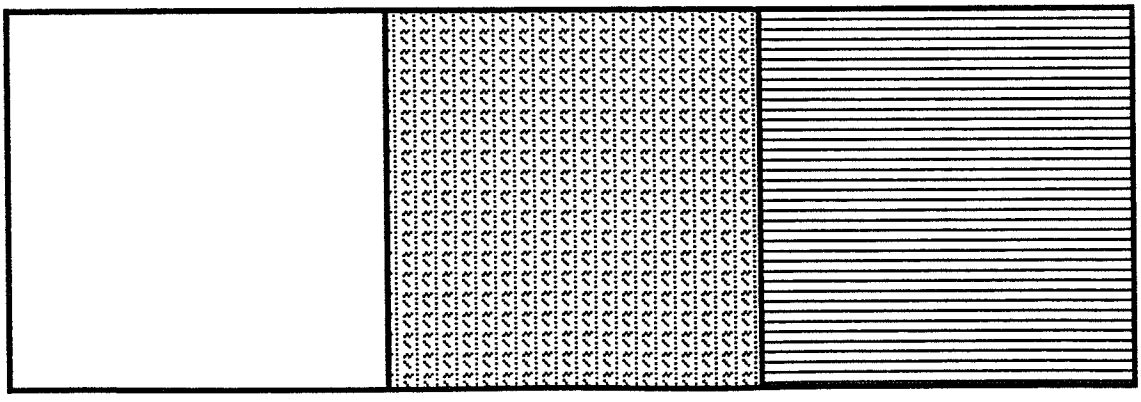
Whirligig



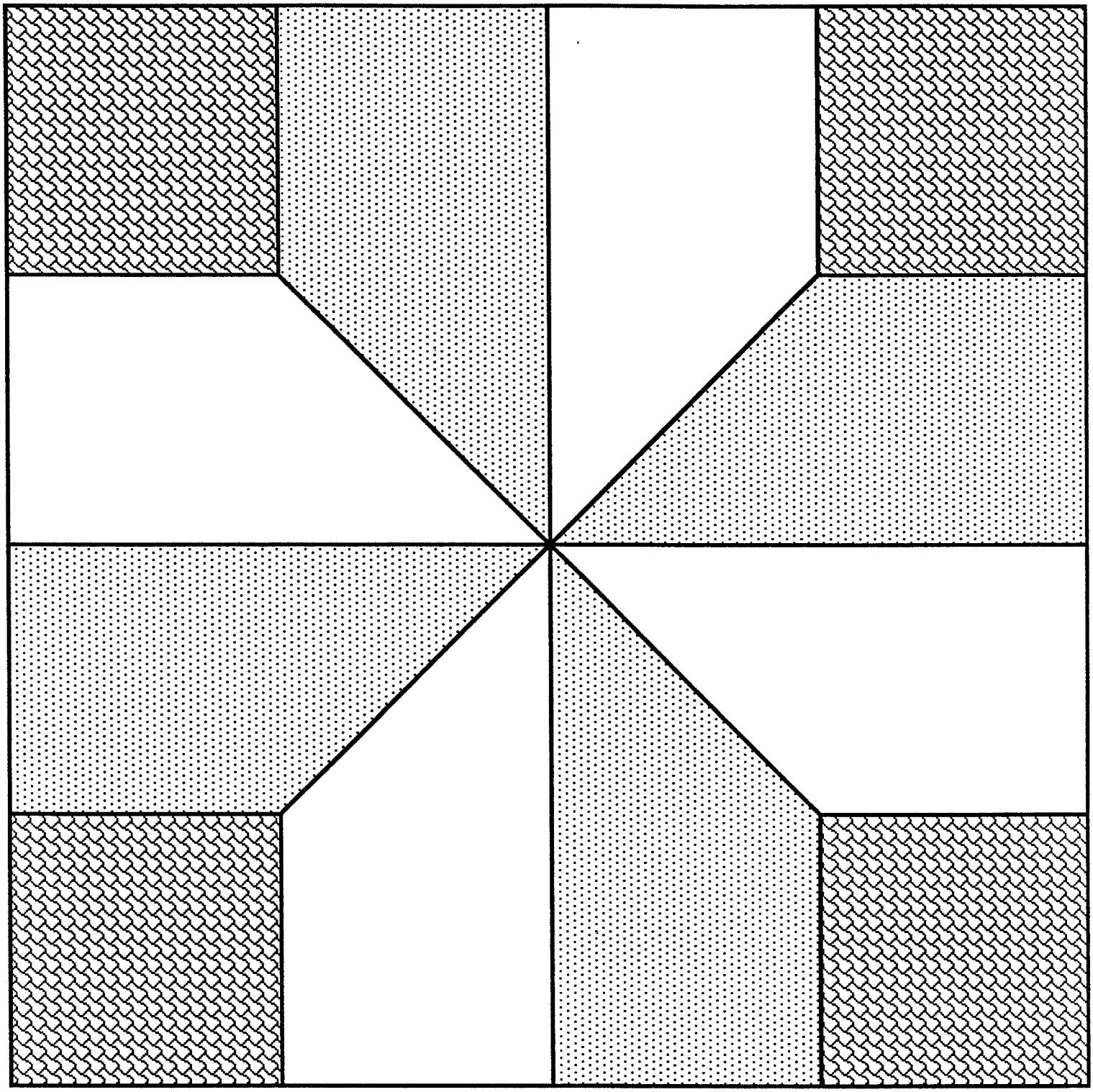


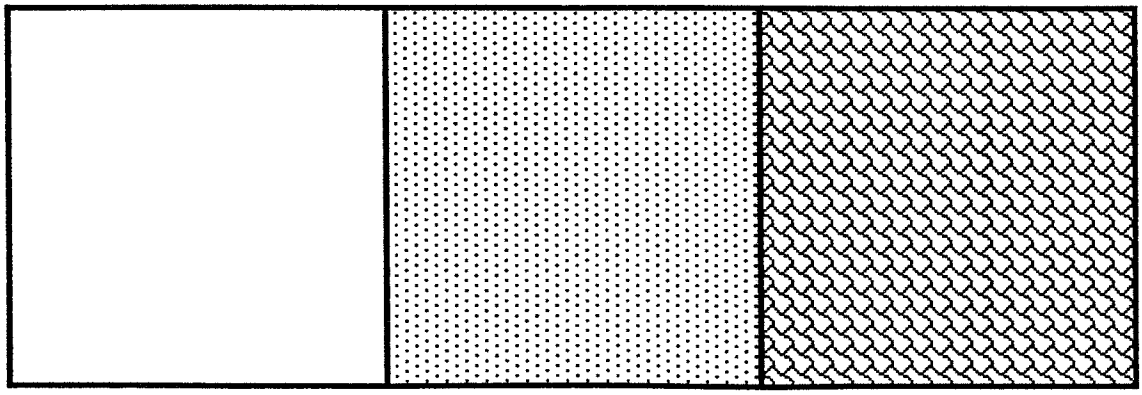
Evening Star



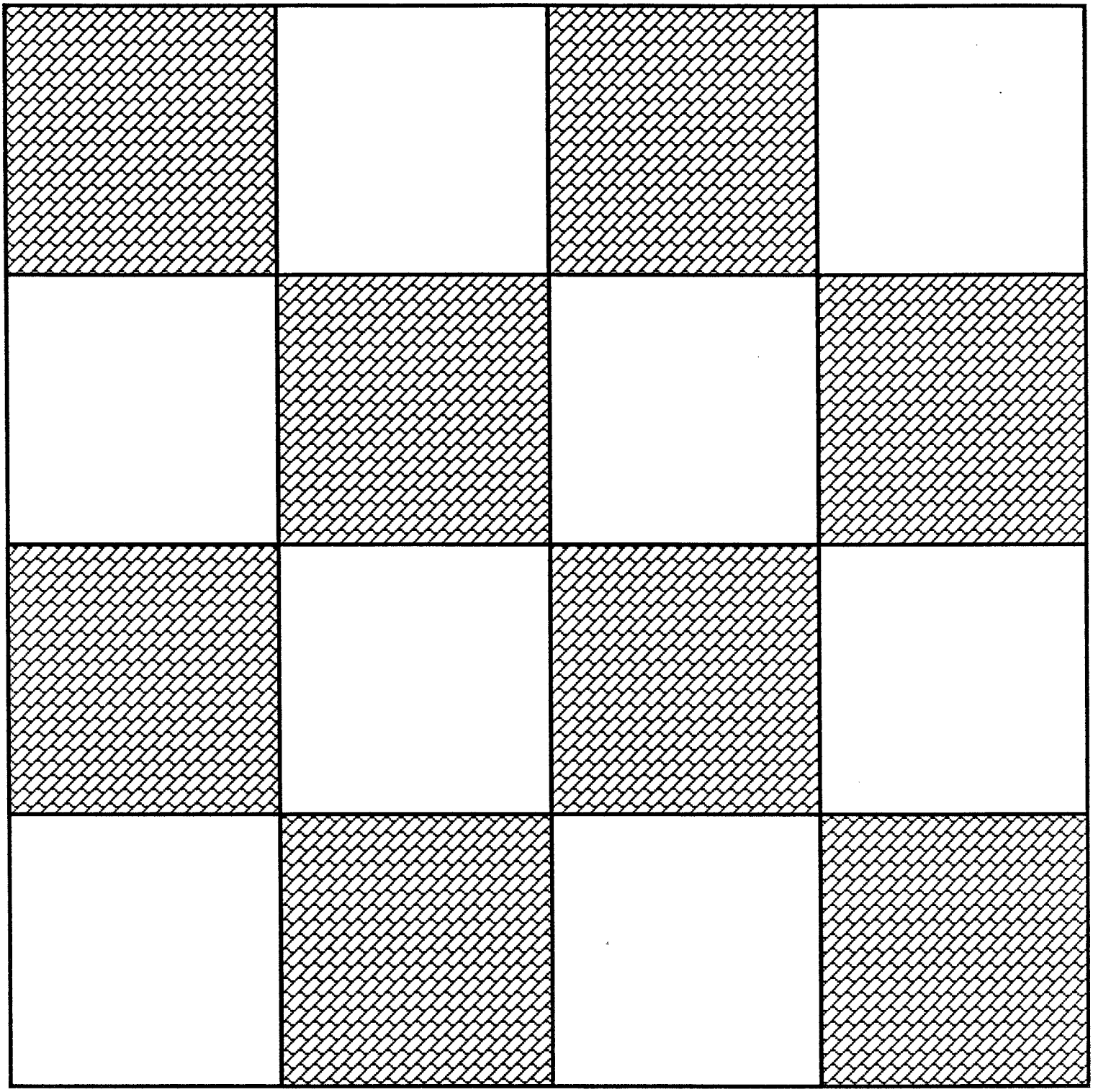


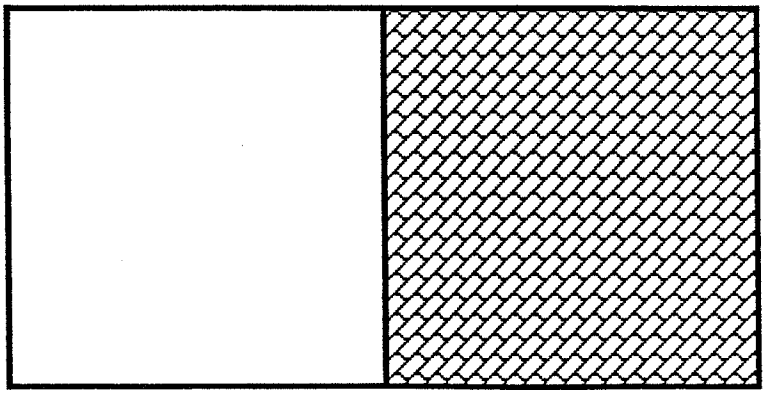
Nelson's Victory



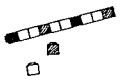


Checkerboard



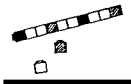


Apply the appropriate labels on both ends of each box lid. Either run the labels on full-sheet Avery Labels No. 5165, cut apart and attach; or simply cut apart these pages and glue or tape on.



Playdough Patterns

A PRACTICE & ENRICHMENT BOX



Unifix Cubes Patterns

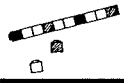
A PRACTICE & ENRICHMENT BOX

Alphabet Stamps

A PRACTICE & ENRICHMENT BOX

Tile Patterns

A PRACTICE & ENRICHMENT BOX



Coin Patterns

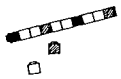
A PRACTICE & ENRICHMENT BOX

Pattern Blocks and Mirrors

A PRACTICE & ENRICHMENT BOX

Sticker Patterns

A PRACTICE & ENRICHMENT BOX

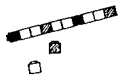


Clock Patterns

A PRACTICE & ENRICHMENT BOX

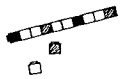
Calendar Patterns

A PRACTICE & ENRICHMENT BOX



Pattern Blocks

A PRACTICE & ENRICHMENT BOX

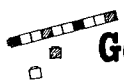


Template Patterns

A PRACTICE & ENRICHMENT BOX

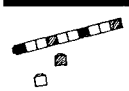
Rubber Stamp Patterns

A PRACTICE & ENRICHMENT BOX



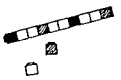
Geoboards, Nuts & Washers

A PRACTICE & ENRICHMENT BOX



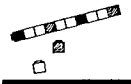
Mirror Patterns

A PRACTICE & ENRICHMENT BOX



Playdough Patterns

A PRACTICE & ENRICHMENT BOX

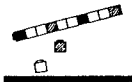


Unifix Cubes Patterns

A PRACTICE & ENRICHMENT BOX

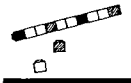
Alphabet Stamps

A PRACTICE & ENRICHMENT BOX



Tile Patterns

A PRACTICE & ENRICHMENT BOX



Coin Patterns

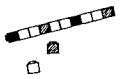
A PRACTICE & ENRICHMENT BOX

Pattern Blocks and Mirrors

A PRACTICE & ENRICHMENT BOX

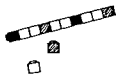
Sticker Patterns

A PRACTICE & ENRICHMENT BOX



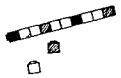
Clock Patterns

A PRACTICE & ENRICHMENT BOX



Calendar Patterns

A PRACTICE & ENRICHMENT BOX



Pattern Blocks

A PRACTICE & ENRICHMENT BOX

Template Patterns

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Rubber Stamp Patterns

A PRACTICE & ENRICHMENT BOX

Geoboards, Nuts & Washers

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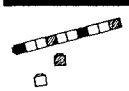
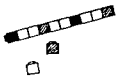


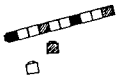
Mirror Patterns

A PRACTICE & ENRICHMENT BOX



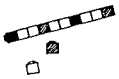
Feely Box Patterns

A PRACTICE & ENRICHMENT BOX



Pattern Shapes Race

A PRACTICE & ENRICHMENT BOX



Quilt Patterns

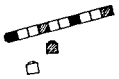
A PRACTICE & ENRICHMENT BOX

Feely Box Patterns

A PRACTICE & ENRICHMENT BOX

Pattern Shapes Race

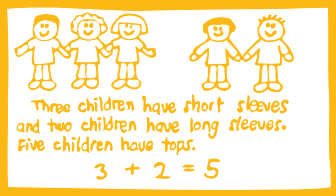
A PRACTICE & ENRICHMENT BOX

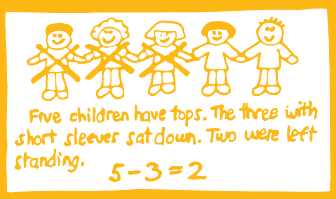


Quilt Patterns

A PRACTICE & ENRICHMENT BOX

Arithmetic





BOX IT OR BAG IT MATHEMATICS

Practice & Enrichment Boxes

Donna Burk • Allyn Snider
Paula Symonds

Published by The Math Learning Center

Box It or Bag It Mathematics, Practice & Enrichment Box: Arithmetic

Box It or Bag It Mathematics consists of:
- Teachers Resource Guide and Blackline Masters, Kindergarten
- Teachers Resource Guide and Blackline Masters, 1st and 2nd Grade
- Practice & Enrichment Boxes:
  - Shapes
  - Introduction to Measuring
  - Understanding Measuring
  - Reading, Writing & Understanding Numerals 0–10
  - Pattern
  - Arithmetic
  - Money
  - Place Value Counting
  - Place Value Addition & Subtraction

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Getting Started

Once you've introduced Arithmetic through a variety of group lessons (be sure to see Box It or Bag It Mathematics Teachers Resource Guide, *ARITHMETIC), you will want children to practice and extend their understanding using the activities that follow in this packet. Here are a few things we've found helpful to remember for a successful Independent Practice Time.*

Provide no more than 8–12 boxed activities at one time for a class of 30. Too many activities create more than tolerable chaos. Each Box is designed to be used by 1–4 children.

Model each activity thoroughly until children can tell you what to do, step by step. You'll find "box ingredients" and "playing instructions" for each activity in this packet. We use clear contact paper to attach them inside our box lids so WE can remember what goes in each box and how each game is played. Reading the directions would be too difficult for most primary children.

Resist the temptation to put out all your challenging Boxes at once—provide an equal balance of easy and hard. (If you set out too many difficult Boxes, all the children will need you at once and the noise level will be almost unbearable as your children try to cope with the stress of too many difficult tasks.)

As you construct these Practice and Enrichment Boxes, cover your box tops with the same design contact paper. That way, you'll be able to pull your Arithmetic Boxes off the shelf easily, even if they've gotten mixed in with other boxes. (Boxes can be ordered from The Math Learning Center in three sizes: standard (9" X 12" X 2"), half size (9" X 6" X 1-7/8") and junk (4" X 7" X 1-1/8".) See the Box It or Bag It Mathematics Teachers Resource Guide, *MATERIALS INDEX, for additional ordering and making information.*

Remember the Boxes themselves can be used for group instruction. They are ideal for use by an aide or parent with small groups. Some of them can be easily adapted for use with your whole group.

During Independent Practice Time, it's critical that you be available and in circulation to make sure things go smoothly. Once routines even out, you'll have opportunities to observe individuals which are not afforded when you conduct group instruction. You can really spot children with problems or understandings beyond your predictions. See the next page for some Observation guidelines.

Be sure to see the Box It or Bag It Mathematics Teachers Resource Guide, *INTRODUCTION, for more implementation strategies.*

Arithmetic Observation Chart

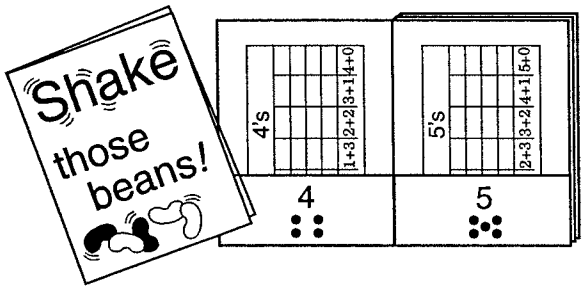
														Children's Names
														Child is able to share materials and work effectively
														Child is able to use work time cooperatively
														Child participates in telling and acting out class story problems
														Child is able to set out appropriate counters in response to story problems
														Child is able to solve story problems with counters
														Child is able to write number sentences for story problems
														Child can count on to solve story problems
														Child uses strategies and patterns to solve problems (Doubles, Neighbors, +10's, +9's, +0, -0, +1, -1 and other patterns)
														Child is becoming aware of reversibility (e.g., 8 - 4 = 4 because 4 + 4 = 8)
														Child knows facts to _____

Facts to Ten

Shake Those Beans (1-4 Children)

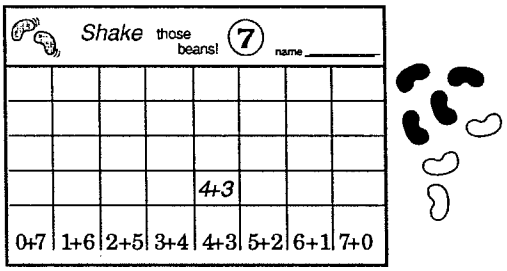
See Box It or Bag It Mathematics Teachers Resource Guide, CHAPTER 14, Shake Those Beans,for group introduction to this box.

Box ingredients→ record sheets
triple folder
spray-painted lima beans
junk box for storage



PLAYING INSTRUCTIONS

1. Choose a record sheet.
2. Count out the appropriate number of beans.
3. Hold the beans in your hand, shake, and drop them gently onto the table.



"If I read the blues first, it's 4 + 3!"

4. Record your shake in the appropriate column. Always record the blues first and then the whites. Continue until at least three columns are filled.

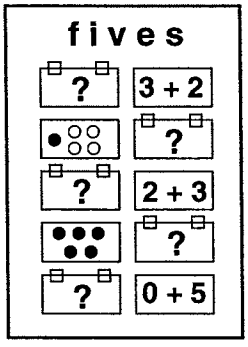
MAKING INSTRUCTIONS

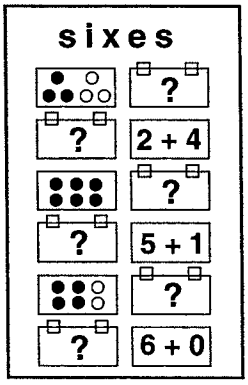
Record Sheets
Locate the 4 through 9 record sheets in the blacklines. Run many copies of each.

Folder to Hold Record Sheets
Buy three colored folders, the kind that have the pockets at the bottom. Tape the folders together to form a book of pockets. Cover the outside with contact paper to match your Arithmetic Boxes and label.

Beans
Buy a one pound bag of regular size lima beans. Pour about one third of the beans into one smooth layer on newspapers. Spray paint with a bright glossy blue on *one side only*. (Testor's model paints are excellent.) Store beans in a labeled junk box covered with contact paper to match your Arithmetic boxes.

Looking Beyond
You might eventually want to make charts for review (one of those two-minute sponge activities) to help children solidify their visual images.





Dice Toss (1-4 Children)

See Box It or Bag It Mathematics Teachers Resource Guide, CHAPTER 14, Dice Toss, for group introduction to this box.

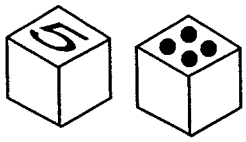
Box ingredients→ dice (four numbered and four dotted)

record sheets

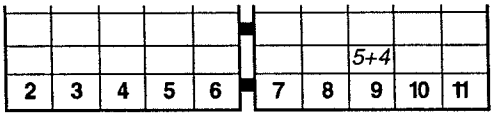
standard box for storage

PLAYING INSTRUCTIONS

1. Choose a dotted die and a numbered die.
2. Get a record sheet.
3. Roll your dice and read them, counting on from the number to the dots.



"Five...six, seven, eight, nine"



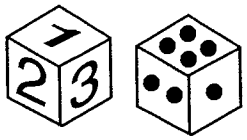
4. Record your problem on the record sheets as above. Continue working until one column is filled. (Many children love working until three columns are filled and then awarding columns 1st, 2nd, or 3rd place by drawing prize ribbons.)

MAKING INSTRUCTIONS

Record Sheets

Locate two Dice Toss record sheets in blacklines. Run copies. Tape together in middle with two pieces of scotch tape.

Dice



Use plain wooden cubes or foam cubes (available from MLC Materials). Make four cubes numbered from 1-6. Make four cubes with dots 0-5. Store dice and record sheets in a standard box.

Piggybank Subtraction (1-4 Children)

See Box It or Bag It Mathematics Teachers Resource Guide, CHAPTER 14, Piggybank Subtraction, for group introduction to this box.

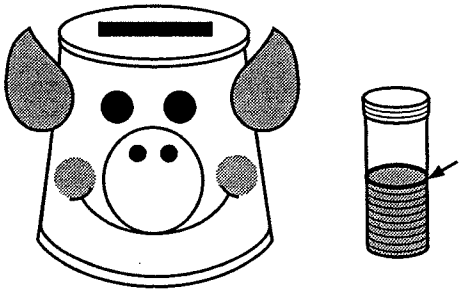
Box ingredients→ piggy banks (4) pennies in coin tube
record sheets subtraction cards in pockets
standard box for storage

PLAYING INSTRUCTIONS

1. Choose a set of subtraction cards.
2. Get out enough pennies to do your set of cards.
3. Read each card and drop as many pennies in the bank as the card tells you. Record what you did and how many are left.
4. Work until you complete your set of cards.

MAKING INSTRUCTIONS

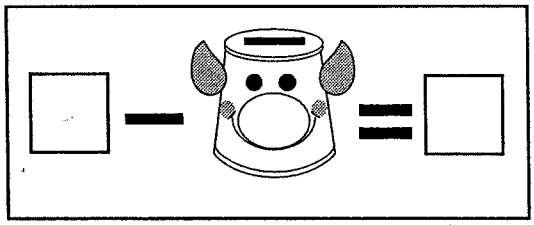
Piggy Banks (4)
It's great if you can find a package of solid pink or beige bathroom Dixie cups—the sturdier kind. Cut slits in bottoms (they will now become the top). Make the cups into pigs by adding felt or construction paper ears, eyes, and snouts. If you can't find Dixie cups, any plain small paper cups are fine.



Pennies in Coin Tube
Borrow 30-40 pennies from your own piggy bank. Buy a *nickel* size coin tube (sold for coin collectors at many hobby shops, large stationery and craft stores, and many dime stores). Put pennies inside and use a Sanford Sharpie pen to draw a line to where the pennies fill the tube. (See previous illustration.) This makes an easy way to check if all pennies have been returned at clean-up.

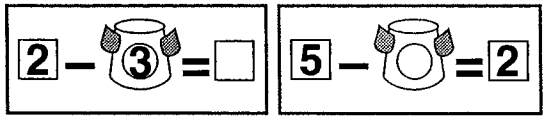
Record Sheets
Locate Piggy Bank Subtraction record sheets in blacklines and run copies.

Subtraction Cards
Find Piggybank Subtraction cards in cardstock portion of this packet. Make them up for all number families 4-9. It is helpful to write each set in a different color marking pen to make them easier to sort at clean-up.



Laminate. Put each set of cards on a binder ring or in a tag pocket for storage. Store sets of cards, record sheets, tube of pennies, and piggy banks in standard box.

Looking Beyond
This could be made up either as a take away model or missing subtrahend model.



Alligator Subraction (1-4 Children)

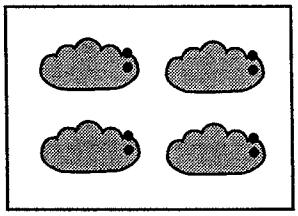
Box ingredients→ swamps (4) swamp critters in junk box

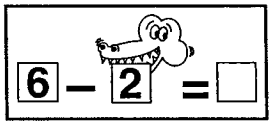
record sheets subtraction cards

standard box for storage

PLAYING INSTRUCTIONS

1. Choose a set of subtraction cards.
2. Get out enough swamp critters to do your set of cards. Place them in the swamp.
3. Read each card and have the "alligator" (your hand, or a puppet if Teacher was feeling rich) eat as many "critters" as the card tells you. Record what you did and how many are left in the swamp.





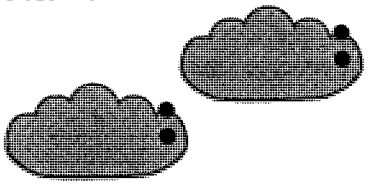
"The card says 6 – 2, so I took 2 out of the swamp!"

4. Work until you complete your set of cards.

MAKING INSTRUCTIONS

Swamps (4)
Cut up 6 X 9 pieces of construction paper to serve as swamps. It's fun to have the children color swamp grass, etc., on these.

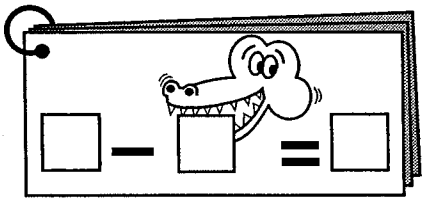
Swamp Critters



Buy some critter-shaped macaroni (thick). Dye it with 1/2 teaspoon to 1 teaspoon of rubbing alcohol and about 20-25 drops of green food coloring. Shake in a sealed ziplock bag until it's fully colored, then dry on newspapers for 1/2 hour. Use a black slick pen (craft stores, about $1) to add eyes. These need to dry overnight.

Record Sheets
Locate Alligator Subtraction record sheets in blacklines and run copies.

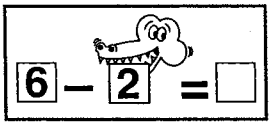
Subtraction Cards
Find Alligator Subtraction cards in cardstock portion of this packet. Make them up for all number families 4-9. It's helpful to write each set in a different color marking pen to make them easier to sort at clean-up time. Laminate. Put each set of cards on a binder ring or in a tag pocket for storage.

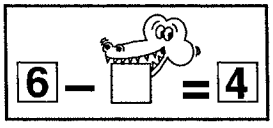


Store sets of cards, record sheets, boxed swamp critters, swamp papers, and puppets, if you have them, in a standard box.

NOTE: Children can use their hands to be the alligators, or, if you're feeling rich, there are very cute alligator puppets available commercially. It is nice to have one puppet to model the activity with your group.

Looking Beyond
This could be made up either as a take away model or missing subtrahend model.





Mountain Subtraction (1-4 Children)

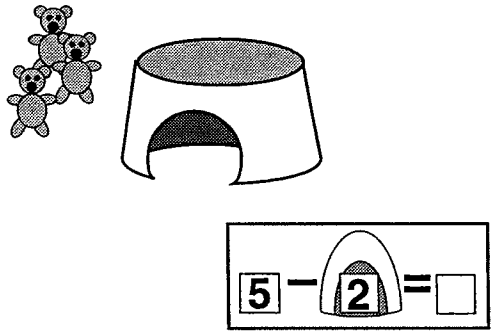
Box ingredients→ caves (4) junk box of counters

record sheets subtraction cards

standard box for storage

PLAYING INSTRUCTIONS

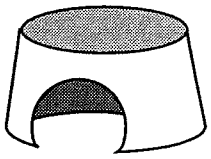
1. Choose a set of subtraction cards.
2. Get out enough counters to do your set of cards.
3. Read each card and tell a story using your counters and the cave. Record a number sentence for each story.



"There were five bears out in the snow. Two of them got so sleepy they went into their cave to hibernate. Three are still playing outside."

MAKING INSTRUCTIONS

Caves (4)
To make each "cave," cut down a small margarine tub or 8 oz. yogurt container to a height of two inches. Cut a small cave opening in the side.



Counters (35-40)
Although small plastic bears or other animals are ideal, any small counters (unifix cubes, buttons, wooden cubes, etc.) will do. Children can pretend these markers are bears or hikers or bats, or any other critters that might have reason to go into a cave. Store counters in a junk box.

Record Sheets
Locate the Mountain Subtraction record sheet in blacklines. Run copies.

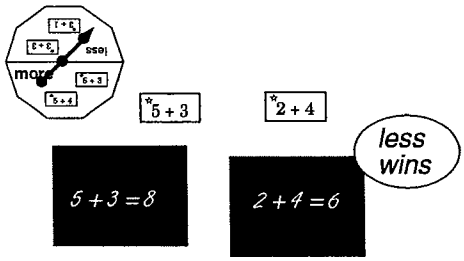
Subtraction Cards
Find Mountain Subtraction cards in cardstock portion of this packet. Make them up for all number families 4-9. It is helpful to write each set in a different color marking pen to make them easier to sort at clean-up time. Laminate. Put each set of cards on a binder ring or in a tag pocket for storage. Store card sets, record sheets, box of counters, and caves in standard box.

Add, Tell, Spin and Win (2 Children)

Box ingredients→ more/less spinner addition equation cards
tiny chalkboards, chalk, and felt erasers (2 of each)
spinner components half box for storage

PLAYING INSTRUCTIONS

1. Mix up cards and place them face down in a pile.
2. Take a card and have your partner do the same. Compute the sums on your chalkboards and compare to determine whose sum is greater, and whose is less.
3. Spin the more/less spinner to determine which of you gets to take both cards.
4. Draw two more cards, compute, compare, and spin. Continue until all the cards have been used. Count your stacks of cards and compare for more or less. The spinner determines the winner.



MAKING INSTRUCTIONS

More/less Spinner

1. Locate spinner top in blacklines.
2. Use a glue stick to glue spinner top to poster board or even sturdy matte board.
3. Cut around edges and cover with clear contact paper, overlapping contact to back side by at least 1/2 inch.
4. Use one set of spinner components (available from MLC Materials) and assemble spinner as shown on instructions.

Chalkboards

Cut two tiny chalkboards from an individual chalkboard. Small matte board "chalkboards" can be ordered from MLC Materials. We invite children to get Unifix cubes or junk boxes if that would help them solve the problems.

Equation Cards

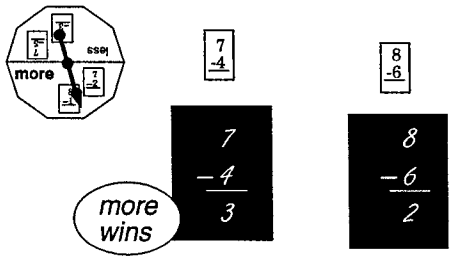
Locate cards. Laminate and cut apart. Store equation cards, chalkboards, chalk, felt erasers and spinner in a half box.

Subtract, Tell, Spin and Win (2 Children)

Box ingredients→ more/less spinner subtraction equation cards
tiny chalkboards, chalk, and felt erasers (2 of each)
half box for storage

PLAYING INSTRUCTIONS

1. Mix up cards and place them face down in a pile.
2. Take a card and have your partner do the same. Compute the differences on your chalkboard and compare to determine whose difference is greater and whose is less.
3. Spin the more/less spinner to determine which of you gets to take both cards.
4. Draw two more cards, compute, compare, and spin. Continue until all the cards have been used. Count your stacks of cards and compare for more or less. The spinner determines the winner.



MAKING INSTRUCTIONS

Spinner
Locate Subtract, Tell, Spin and Win more/less spinner top in blacklines. See Add, Tell, Spin, and Win for assembly instructions.

Chalkboards
See Add, Tell, Spin and Win for instructions.

Equation Cards
Locate cards, laminate, and cut apart. We invite children to get Unifix cubes or junk boxes if that would help them solve the problems. Store equation cards, chalkboards, chalk, felt erasers and spinner in a half box.

Add and Think (2-4 Children)

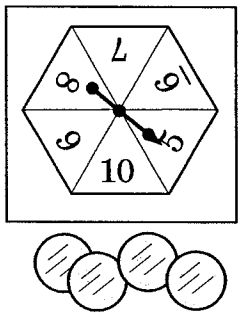
Box ingredients→ gameboards (4) spinner

record sheets junk box of game markers

standard box for storage

PLAYING INSTRUCTIONS

1. Spin spinner to see who starts game. High spin begins.
2. First player spins and searches for addends of number spun. Place your game markers over the addends you choose.



1	4	0	3
5	6	3	4
6	2	4	2
5	8	7	3

In this case where 5 is spun, player could cover the following: 1, 2, 2; or 2, 3; or 5, 0

3. Record the combination you made on your record sheet.
4. Partner spins, searches for addends on his/her board and then records.
5. Play continues as above until one player has covered four in a row vertically, horizontally or diagonally. (Some players love to play for blackout.)
6. When a game ends, each player draws a red line under the last equation written and game can begin again. (This way they continue to use the same record sheet.)

Add and Think! *Dayna*
1 + 2 + 2 = 5

MAKING INSTRUCTIONS

Spinner
Locate *easy* Add and Think spinner top in blacklines. See spinner information in Add, Tell, Spin, and Win.

Record Sheet
Locate in blacklines and run copies.

Gameboards
Locate gameboards, laminate and cut apart.

Markers
Assure children that they may use chalkboards or junk boxes or Unifix cubes to help figure these out.

Math Magic (2-4 Children)

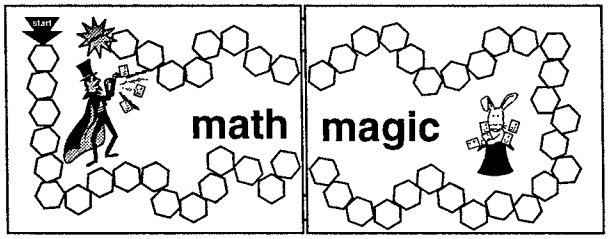
Box ingredients→ gameboards
equation cards
markers (4)
standard box for storage

PLAYING INSTRUCTIONS

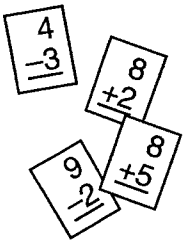
1. Set your markers on "Go".
2. Shuffle the equation cards and place them face down in a pile.
3. Take turns drawing a card, computing the sum or difference and moving the appropriate number of spaces on the gameboard. (Some of our children love moving backwards for subtraction and forward for addition. They decide before beginning how they will move.)

MAKING INSTRUCTIONS

Math Magic Gameboard
Locate the gameboard (two sheets) in cardstock portion of packet. Color the spaces on the gameboard sheets. Cover with clear contact or laminate. Hinge them together with tape.



Addition/Subtraction Equation Cards
Make up a set of 30-40 addition and subtraction cards appropriate to the levels you want your children to practice. Use 2-1/2 X 3-1/2 tag, or precut cards available commercially. Laminate.



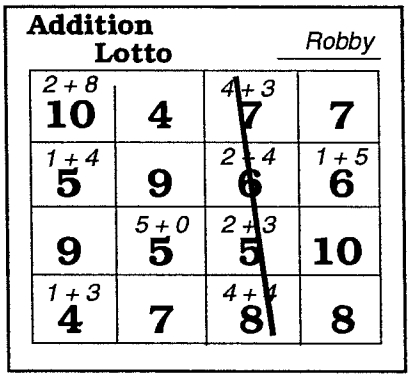
Game Markers (4)
Use Unifix cubes in four different colors. Buttons or other small colored counters will work, too. Store game markers, equation cards, and gameboard in standard box.

Addition Lotto (2-4 Children)

Box ingredients→ record sheets
double folder
equation cards
junk box for storage

PLAYING INSTRUCTIONS

1. Select a record sheet. Make sure yours is a different color than anyone else's.
2. Have one person be the caller. He/She holds up a card and all the players read it. The players quickly solve the combination and record it on their record sheet in an appropriate box. Caller continues to hold up card until all have recorded the number sentence.
3. Continue playing until someone has four in a row, vertically, horizontally, or diagonally. Many children enjoy playing for blackout.

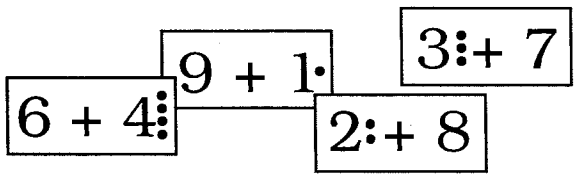


MAKING INSTRUCTIONS

Record Sheets
Locate Addition Lotto record sheets in blacklines. Run copies. Each blackline will be run on its own color of copier paper.

Equation Cards—Addition
Locate cards, laminate and cut apart.

Dots are put by smaller number in equation to enable children to "count on" to total if needed.



Store equation cards in a junk box covered to match your Arithmetic boxes.

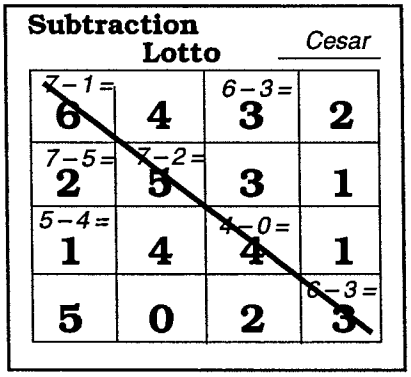
Folder to Hold Record Sheets
Buy two colored folders—the kind that have pockets at the bottom. Tape and cover as in Shake Those Beans.

Subtraction Lotto (2-4 Children)

Box ingredients→ record sheets
double folder
equation cards
junk box for storage

PLAYING INSTRUCTIONS

1. Select a record sheet. Make sure yours is a different color than anyone else's.
2. Have one person be the caller. He/She holds up a card and all the players read it. Solve the combination together and record it on your record sheets in an appropriate box. Caller continues to hold up card until all have recorded the number sentence.



3. Continue playing until someone has four in a row, vertically, horizontally, or diagonally. (See illustration.) Many children enjoy playing for blackout.

MAKING INSTRUCTIONS

Record Sheets
Locate Subtraction Lotto record sheets in blacklines. Each blackline will be run on its own color of copier paper. See Addition Lotto for double folder directions.

Equation Cards—Subtraction
Locate cards, laminate and cut apart. Store equation cards and record sheets in a junk box.

Subtraction Top Draw (2 Children)

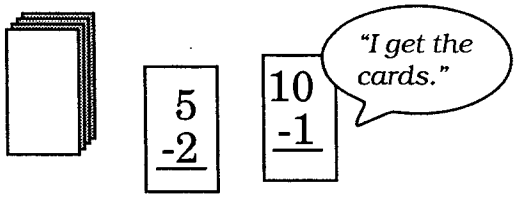
Box ingredients→ subtraction cards junk box for storage

PLAYING INSTRUCTIONS

1. Shuffle the cards and place them face down in a pile.
2. Take a card from the pile and have your partner do the same. Get a junk box from the math materials shelf if you need counters to compute the difference on your card.
3. Compare answers. The person with the larger answer captures both cards.
4. Continue playing until there are no more cards. The person with the most cards wins.

MAKING INSTRUCTIONS

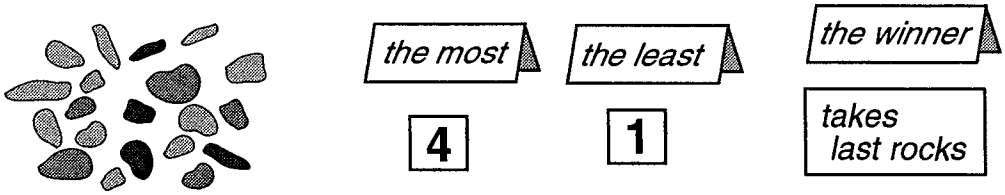
Subtraction Cards
Locate cards, laminate and cut apart. Store subtraction cards in a covered and labeled junk box. **Note:** Tiny chalkboards could be added if desired.



Rock Pile (2 Children)

Box ingredients→ junk box of small rocks labeling cards

half box for storage



PLAYING INSTRUCTIONS

1. Decide how many rocks will be in the starting pile. Set out that many in a pile.
2. Decide what the maximum number of rocks you can take in one turn will be. Set out a numeral card to show that.
3. Decide what the fewest number of rocks you can take in one turn will be. Set out a numeral card to show that.
4. Decide whether it will be the "winner" or "loser" who picks up the last rocks. Set out a card to show that.
5. Take turns removing rocks according to the rules you've set up until winner is determined.

MAKING INSTRUCTIONS

Rocks
Have children bring in beautiful pebbles. (Donna's children colored gray rocks with crayons.) Or spray paint lima beans to serve as "rocks." You'll probably want 30-40 for your set. Store in a junk box.

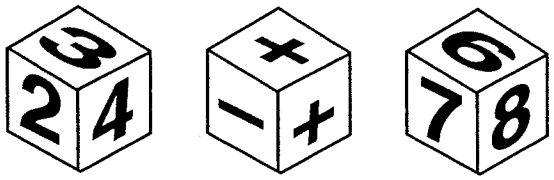
Cards
Cut four pieces of tag 5 X 8 and fold in half lengthwise to create stand-up cards. Label the cards individually with: *the most; the least; the winner; the loser.* Numeral Cards—Cut seven pieces of tag 4 X 4. Label each with a numeral 1-7. *Takes Last Rocks*—Cut one piece of tag 3 X 7. Label. Store cards and boxed rocks in a half box.

Go For It (2 or 4 Children)

Box ingredients→ gameboards (2) game markers (4)
numeral and operation dice (6)
standard box for storage

PLAYING INSTRUCTIONS

1. Place your marker on the start arrow. Have your partner do the same.
2. Take turns. Roll two numbered dice and one +/- die. Arrange the dice to form an equation and compute the sum or difference.



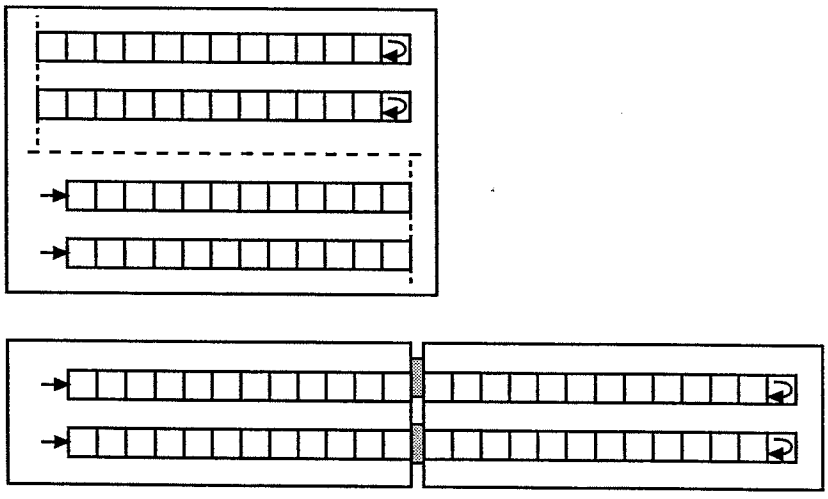
3. Move your marker forward the sum or difference on your side of the gameboard. Some players prefer to go backwards when a subtraction equation is made. Decide on this before you start.
4. Continue playing back and forth until one of you reaches the end.

MAKING INSTRUCTIONS

Gameboards (2)
Locate gameboards, laminate, and cut on dotted lines. Tape pieces at the back with filament tape hinges. (See illustration below.)

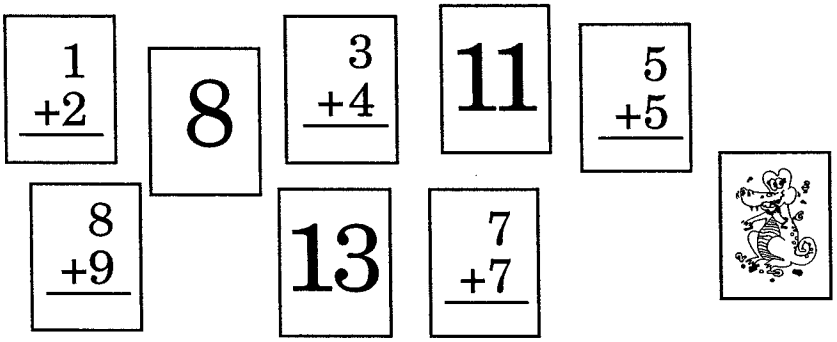
Dice (6)
Use plain wooden cubes or foam cubes for dice. Cubes are available from MLC Materials. Write on your cubes with a permanent Sanford Sharpie marking pen. Make two 0-5 dice, two 6-10 dice, and two -/+ dice.

Game Markers (4)
Use Unifix cubes in four different colors or other small colored counters. Store game markers, gameboards, and dice in a standard box.



Number Muncher (2-4 Children)

Box ingredients→ equation cards junk box for storage



PLAYING INSTRUCTIONS

1. Shuffle the cards and place them face down in a pile.
2. Pass out cards to every player until all cards are used.
3. Players look through cards and find any pairs in their hands. They lay all matches down.
4. Just as grownups play cards drawing from one another, the children take turns drawing from each other's hands in clockwise or counterclockwise fashion. They lay any matching pairs down on the table.
5. The children left with the Number Muncher loses or wins the game—the children decide! This game gets noisy but we think it's worth it. The children really love the game.

MAKING INSTRUCTIONS

Equation Cards
Locate equation cards, laminate and cut apart. Store equation cards in covered and labeled junk box.

Facts to Eighteen

Doublesland (2-4 Children)

See Box It or Bag It Mathematics Teachers Resource Guide, CHAPTER 14, Doubles, for group introduction to this box.

Box ingredients→ gameboard
doubles game cards
game markers (4)
standard box for storage

PLAYING INSTRUCTIONS

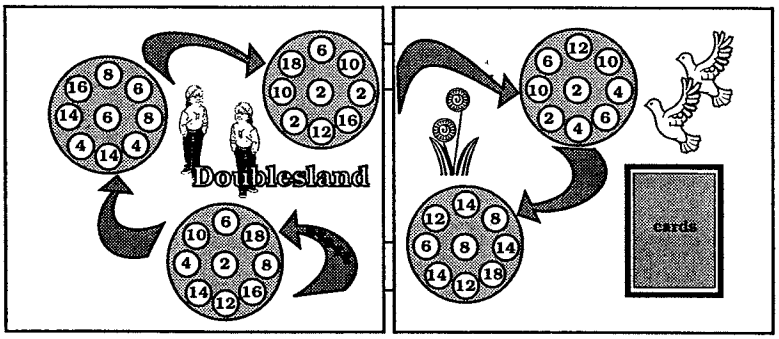
1. Shuffle the game cards and place them face down on the gameboard.
2. All players place your markers at start.
3. Take turns. Draw a game card and compute the sum. Try to find that sum in the first cluster. If it is there, you may move to that cluster. If the sum is not there, you may not move.
4. Move in the same fashion from cluster to cluster.
5. The first player to return to the starting cluster wins. Some children like to play twice or even three times around.

MAKING INSTRUCTIONS

Gameboard
Locate gameboards in cardstock portion of this packet. Color and contact or laminate. Hinge the boards together with tape so it folds to fit your box.

Equation Cards
Locate in packet. Laminate or contact and cut apart.

Game Markers (4)
Use four Unifix cubes in different colors or other small colored counters. Store game markers, gameboard, and equation cards in a standard box.



Fast Tens (1-4 Children)

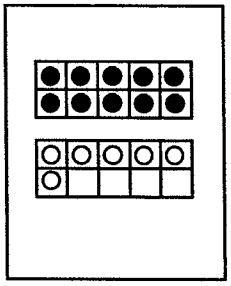
See Box It or Bag It Mathematics Teachers Resource Guide, CHAPTER 14, Fast Tens, for group introduction to this box.

Box ingredients→

- record sheets
- ten frame boards (2)
- crayons
- spinners (2)
- junk box of counters
- standard box for storage

PLAYING INSTRUCTIONS

1. Work with a partner to set out a ten frame board and lay out ten counters on the upper frame. These will remain set up for the whole activity.
2. Spin the spinner. Set the appropriate number of counters out on the lower frame. Compute the total and color a space in the appropriate column of the record sheet.



"We spun ten plus six. We set it up on our board and we can see it's 16!"

3. Continue spinning and coloring in your record sheets until at least one column is filled.

MAKING INSTRUCTIONS

Fast Ten Spinners (2)
Find spinner tops in blacklines. Color each section of the spinner a different color so it can be more easily read. See spinner information in Add, Tell, Spin, and Win.

Record Sheets
Locate Fast Tens record sheet in blacklines. Run copies.

Ten Frame Boards (2)
Locate ten frame boards in cardstock portion of this packet. Laminate.

Counters (30-40)
Use any small objects that don't roll (bread tags, buttons, Unifix cubes, etc.). Store them in a junk box. Store boxed counters, ten frame boards, spinners and record sheets in a standard box.

Fast Nines (1-2 Children)

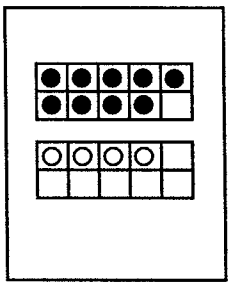
See Box It or Bag It Mathematics Teachers Resource Guide, CHAPTER 14, Fast Nines, for group introduction to this box.

Box ingredients→

- spinners (2)
- ten frame boards (2)
- crayons
- record sheets
- junk box of counters
- standard box for storage

PLAYING INSTRUCTIONS

1. Work with a partner to set out a ten frame board and lay out nine counters on the upper frame. These will remain set up for the whole activity.
2. Spin the spinner. Set the appropriate number of counters out on the lower frame. Compute the total and color a space in the appropriate column of the record sheet.



"We spun nine plus four. We'll set that out. Now we'll move one up. That'll make it ten plus three, which is thirteen, so we know 9 + 4 = 13!"

3. Continue spinning and coloring in your record sheets until at least one column is filled.

MAKING INSTRUCTIONS

Spinner
Locate the Fast Nines spinner tops in the blacklines. Color each section of the spinner a different color so it can be more easily read. See spinner information in Add, Tell, Spin, and Win

Record Sheets
Locate Fast Nines record sheet in blacklines. Run copies.

Ten Frame Boards (2)
Locate ten frame boards in cardstock portion of this packet. Laminate.

Counters (30-40)
Use any small objects that don't roll (bread tags, buttons, Unifix cubes, etc.). Store in a junk box. Store box of counters, ten frame boards, spinners, and record sheets in a standard box.

Fast Nines and Fast Tens Dice Toss (1-4 Children)

See Box It or Bag It Mathematics Teachers Resource Guide, CHAPTER 14, Fast Nines and Fast Tens Dice Toss, for group introduction to this box.

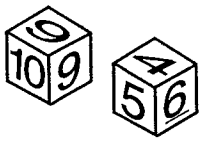
Box ingredients→ dice (12) record sheets

standard box for storage

PLAYING INSTRUCTIONS

1. Roll the 9's and 10's die and the 0-5 die. Add the two numbers. Record the combination on the appropriate side of your record sheet.
2. Repeat, but use the 9's and 10's die and the 4-9 die. Continue to roll and record on your record sheet, switching the 0-5 and 4-9 dice frequently. Keep playing until at least one column is completely filled.

9 + 9 = 18	
9 + 4 = 13	*10 + 8 = 18*
9 + 3 = 12	*10 + 3 = 13*
9 + 1 = 10	*10 + 2= 12*
9 + 5 = 14	*10 + 1 = 11*
Fast 9's	**Fast 10's**



9 + 4 = 13

"It's a fast 9!"

MAKING INSTRUCTIONS

Record Sheets
Locate Fast Nines and Fast Tens Dice Toss in the blacklines. Run copies.

Dice
Use plain wooden cubes or foam cubes (available from MLC Materials). Using a Sanford Sharpie pen, label four with nines and tens on all surfaces, four with numerals 0-5, and four with numerals 4-9, .

Store dice and record sheets in a standard box.

Doubles, Neighbors, Fast Nines, Fast Tens, and Leftovers Dice Toss (2 or 4 Children)

See Box It or Bag It Mathematics Teachers Resource Guide, CHAPTER 14, Doubles, Neighbors, Fast Nines, Fast Tens, and Leftovers, for group introduction to this box.

Box ingredients→ record sheets dice (4)

wall charts of Fast Nines, Fast Tens, Doubles and Neighbors

standard box for storage

PLAYING INSTRUCTIONS

1. You and your partner both get a record sheet.
2. Take turns rolling a 4-9 die and a 5-10 die. Figure out what *kind* of combination you rolled. Is it a fast nine, a fast ten, a double, a neighbor, or a leftover? (A leftover is any combination that is *not* one of the above.) If you're not sure, refer to the wall charts.
3. Once you have it figured out, enter the combination you rolled in the appropriate column on your record sheet. Put in the answer, too.

Round 3	9 + 7 = 16		6 + 6 = 12	8 + 9 = 17	
Round 2	9 + 4 = 13	10 + 7 = 17	5 + 5 = 10	6 + 7 = 13	4 + 8 = 12
Round 1 ☆	9 + 3 = 12	10 + 4= 14	8 + 8 = 16	6 + 7 = 13	4 + 6 = 10
	Fast 9's	**Fast 10's**	**Doubles**	**Neighbors**	**Leftovers**

4. The first person to complete a row *across* wins that round and can put a star by the number of that round. If you roll a double, 6 + 6, for instance. and you've already filled that box, you have to wait until your partner has had a turn and try again. Play as many rounds as you have time for. The record sheet above shows a player who is up to Round 3 and has won Round 1.

MAKING INSTRUCTIONS

Record Sheets

Locate the Doubles, Neighbors, Nines, Tens, and Leftovers Dice Toss record sheet in the blacklines. Run copies.

Dice

Use plain wooden or foam cubes (available from MLC Materials) and a Sanford Sharpie pen. Make two dice numbered 4-9 and two numbered 5-10. Store dice and record sheets in a standard box.

Wall Charts

Use large chart paper of some sort.

Fast 9's

9 +0 = 9	9 +1 = 10	9 +2 = 11	9 +3 = 12	9 +4 = 13
9 +5 = 14	9 +6 = 15	9 +7 = 16	9 +8 = 17	9 +9 = 18
9 +10 = 19				

Fast 10's

10 +0 = 0	10 +1 = 11	10 +2 = 12	10 +3 = 13	10 +4 = 14
10 +5 = 15	10 +6 = 16	10 +7 = 17	10 +8 = 18	10 +9 = 19
10 +10 = 20				

Doubles & Neighbors

2 +2 = 4	2 +3 = 5	3 +3 = 6	3 +4 = 7	4 +4 = 8	4 +5 = 9
5 +5 = 10	5 +6 = 11	6 +6 = 12	6 +7 = 13	7 +7 = 14	7 +8 = 15
8 +8 = 16	8 +9 = 17	9 +9 = 18	9 +10 = 19	10 +10 = 20	

Write doubles in one color, neighbors in another.

Tic Tac Toe (2 or 4 Children)

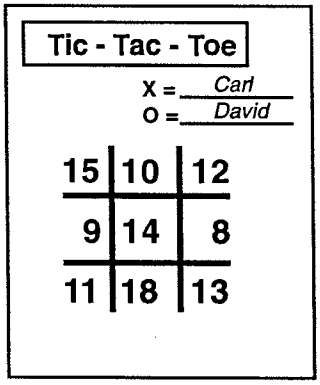
See Box It or Bag It Mathematics Teachers Resource Guide, CHAPTER 14, Tic Tac Toe, for group introduction to this box.

Box ingredients→ dice (4) record sheets

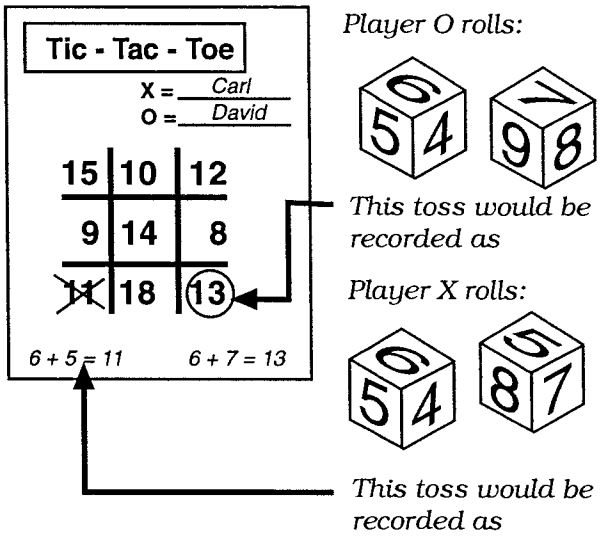
standard box for storage

PLAYING INSTRUCTIONS

1. Each child needs a record sheet. The children determine who will be "X" and "O" and write their names on their record sheet.
2. The grids are filled in using numerals 8-18. It's OK to repeat numerals. Our children like to take turns selecting the numerals. We have found it helpful to display inside our box lid the numerals needed to fill in the grids.



3. Take turns rolling two 4-9 dice. Both players mark their record sheets on every turn.
4. The first player to get three X's or three O's in a row wins.



MAKING INSTRUCTIONS

Record Sheets
Locate Tic Tac Toe record sheets in the blacklines. Run copies.

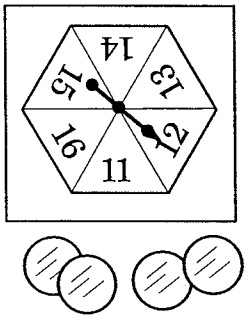
Dice (4)
Use plain wooden cubes or foam cubes (available from MLC Materials) and a Sanford Sharpie pen. Number all four dice with the numerals 4-9. Store dice and record sheets in a standard box.

Add and Think (2 Children)

Box ingredients→ gameboards (2) spinner
record sheets junk box of game markers
standard box for storage

PLAYING INSTRUCTIONS

1. Spin spinner to see who starts game. High spin begins.
2. First player spins and searches for a way to make the number spun. Place your game markers over the addends you choose.



0	3	3	6
2	1	5	4
8	6	7	3
4	5	2	2

In this case where 12 is spun, player could cover the following: 6, 6; or 5, 4, 3; or 5, 6, 1; or 8, 4; etc. Pick one set of factors and cover them.

3. Record the combination you made on your record sheet.
4. Let your partner spin, mark addends on his/her board and record on his/her record sheet.
5. Continue playing until one of you has covered four in a row vertically, horizontally, or diagonally. (Some children love to play for blackout.)
6. When a game ends, draw a red line under the last equations you wrote on your record sheets and start again.

Add & Think *Darrell*
8 + 4 = 12

MAKING INSTRUCTIONS

Spinner
Locate *hard* Add and Think spinner top in blacklines. Assemble as directed in Add, Tell, Spin, and Win.

Record Sheets
Locate Add and Think record sheet in blacklines. Run copies.

Gameboards
Locate boards, laminate and cut apart.

Game Markers (35-40)
Clear colored plastic round game markers (available from MLC Materials) are ideal, but any small counters will do. Store in a junk box.

Store boxed markers, spinner, gameboards, and record sheets in standard box.

21 (2-4 Children)

See Box It or Bag It Mathematics Teachers Resource Guide, CHAPTER FOURTEEN, 21, for group introduction to this box.

Box ingredients→ scorecards (4) cards

tiny box of "jewels" half box for storage

PLAYING INSTRUCTIONS

1. Each child takes a scorecard.
2. The box of "jewels" is opened and set in the center.
3. The deck of cards is mixed up and placed face down in a pile.
4. The dealer deals two cards to each player, one face up and one face down. Each player adds up those two cards.
5. Each player may continue asking for cards in his/her effort to get closest to 21.
6. All players display cards. The player who gets closest to 21 (*without going over*) wins each time.
7. The winner takes a "jewel" and places it on scorecard.
8. At the end of the game, the player with the most jewels wins.

MAKING INSTRUCTIONS

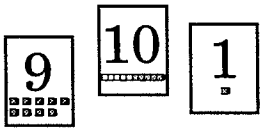
Cards (52)
Locate cards, laminate and cut apart.

Scorecards
Cut four cards (3 X 4) which children will use to hold winning jewels.

Jewels
Anything you have available works! You could use tiny shells, colored macaroni, fake coins, whatever. Store in a tiny box. Store boxed jewels, cards, and scorecards in a half box.

"Who is closest to 21?"

"23
Too much...
I went over!"



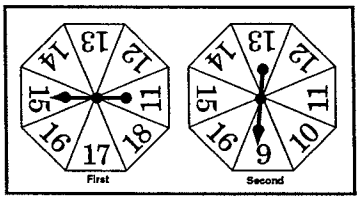
"20!"

What's Missing? (1-4 Children)

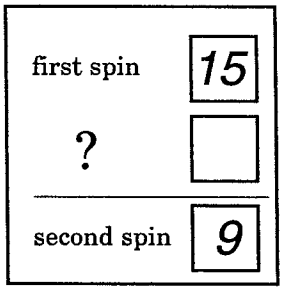
Box ingredients→ dice (8)
Unifix cubes
record sheets
standard box for storage

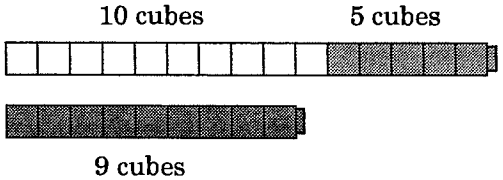
PLAYING INSTRUCTIONS

1. Take a double spinner. Spin the first spinner, add, and record the amount beside the words "first spin" on your record sheet.
2. Set out the appropriate number of Unifix cubes.
3. Spin the second spinner, add, and record the amount by "second spin." Compare your stacks and record the difference by the question mark.



"I got 15 on my first spin and 9 on my second. Now I have to figure out how to get from 15 to 9. Looks like I have to take some away."





"The difference is 6."

MAKING INSTRUCTIONS

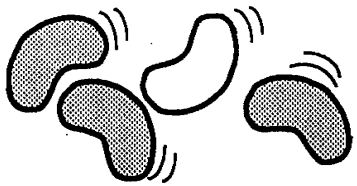
Record Sheets
Locate What's Missing? record sheet in the blacklines. Run copies.

Spinners
Locate spinner tops and make up double spinner. See spinner information in Add, Tell, Spin and Win.

Junk Box of Counters
Any small, non-rolling counters (pebbles, shells, buttons, bread tags, Unifix cubes, etc.) will do. Store in a junk box. Store spinners and record sheets in standard box.

Blacklines

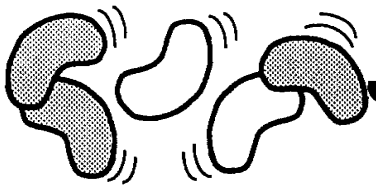
Patterns, cards, spinners, and other materials you'll make for the Practice & Enrichment Boxes described in this packet.



Shake those beans! 4

name _____

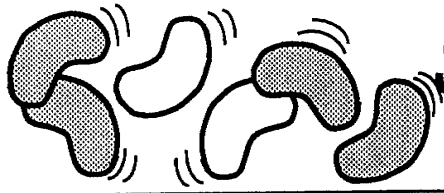
0 + 4	**1 + 3**	**2 + 2**	**3 + 1**	**4 + 0**



Shake those beans! 5

name _____

0 + 5	**1 + 4**	**2 + 3**	**3 + 2**	**4 + 1**	**5 + 0**



Shake those beans! 6

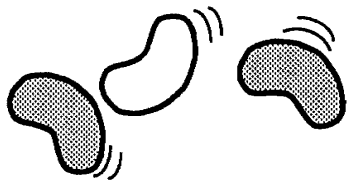
name _____

0 + 6	**1 + 5**	**2 + 4**	**3 + 3**	**4 + 2**	**5 + 1**	**6 + 0**

Shake those beans! 7

name _____

0 + 7	**1 + 6**	**2 + 5**	**3 + 4**	**4 + 3**	**5 + 2**	**6 + 1**	**7 + 0**

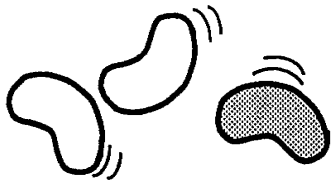


Shake those beans!

8

name _____

0 + 8	**1 + 7**	**2 + 6**	**3 + 5**	**4 + 4**	**5 + 3**	**6 + 2**	**7 + 1**	**8 + 0**



Shake those beans! 9

name _____

0 + 9 9	1 + 8 9	2 + 7 9	3 + 6 9	4 + 5 9	5 + 4 9	6 + 3 9	7 + 2 9	8 + 1 9	9 + 0 9

name _____

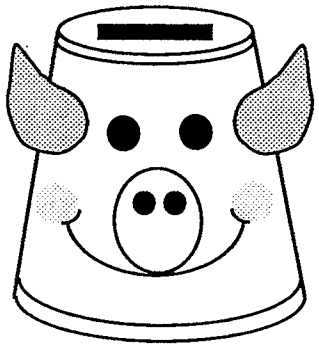
Dice Toss

2	3	4	5	6

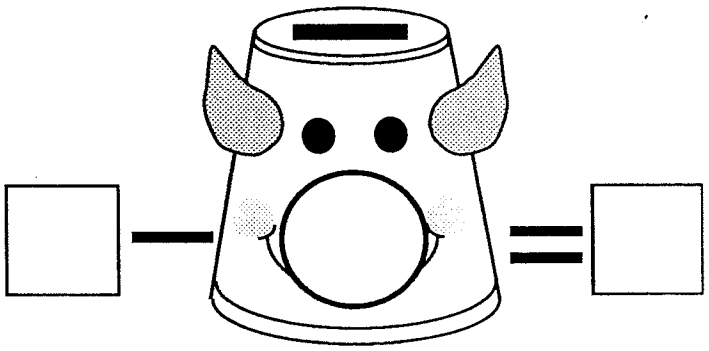
Dice Toss

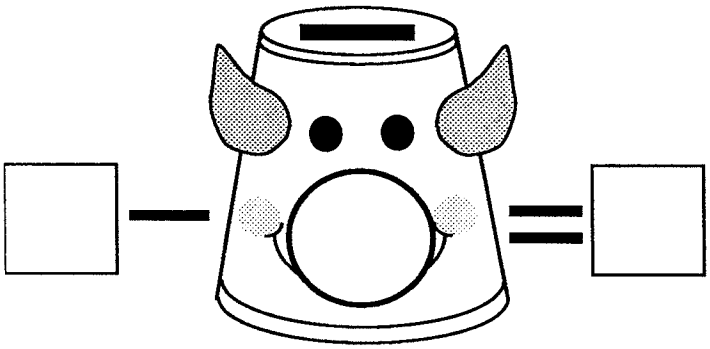
7	8	9	10	11

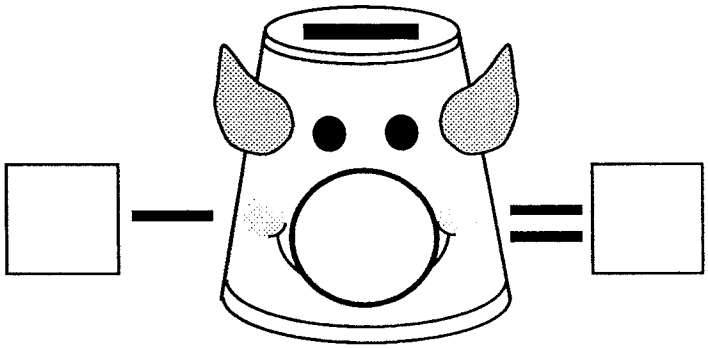
Piggy Bank Subtraction

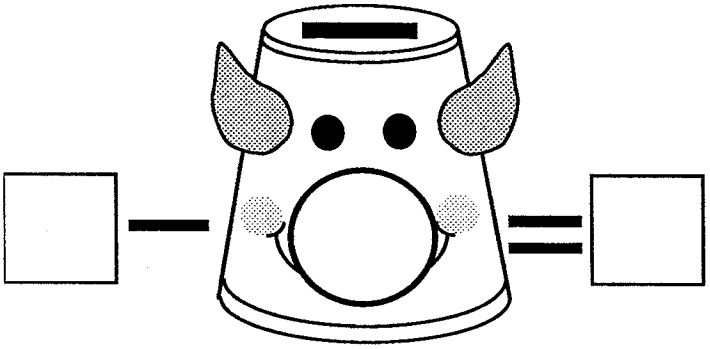


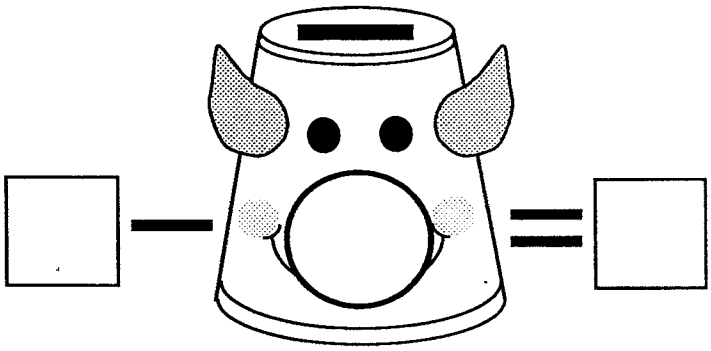
name _____

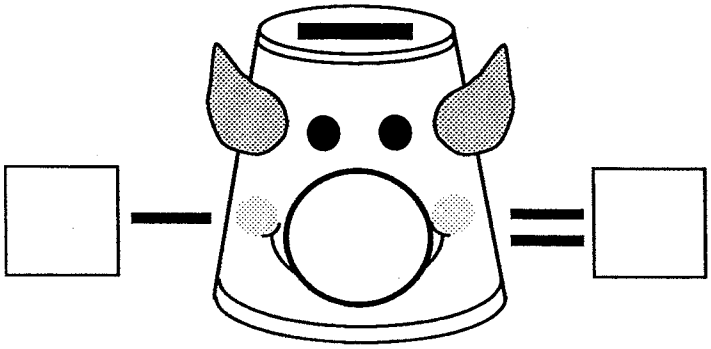


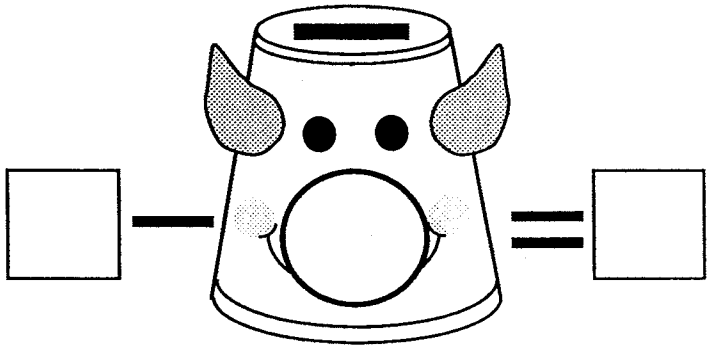




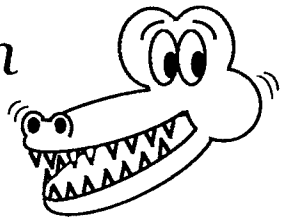




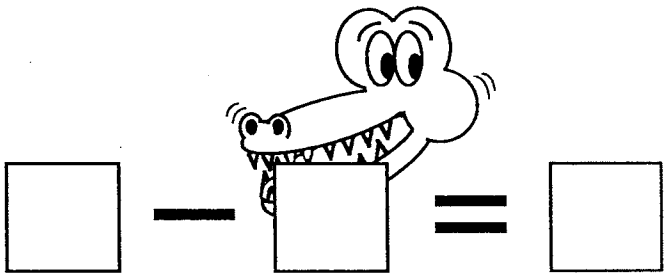


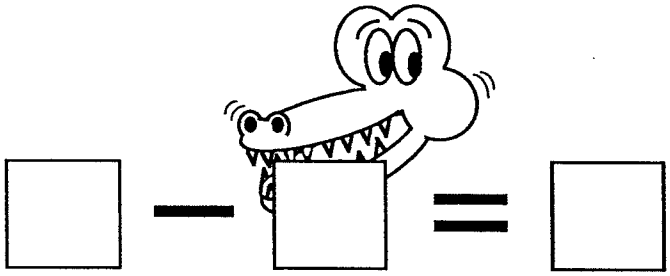


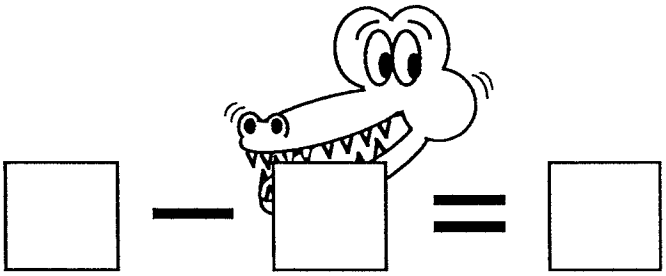
Alligator Subtraction

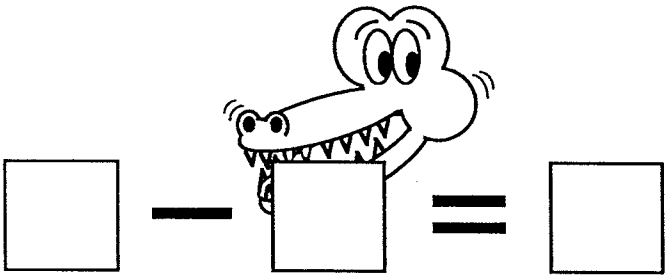


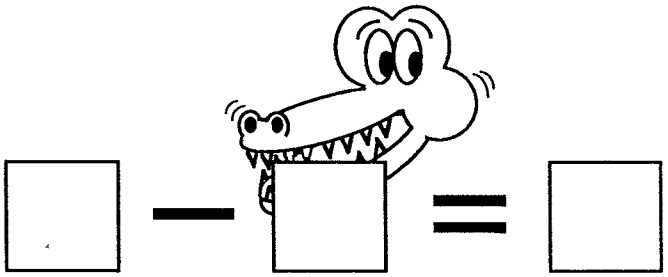
name _____

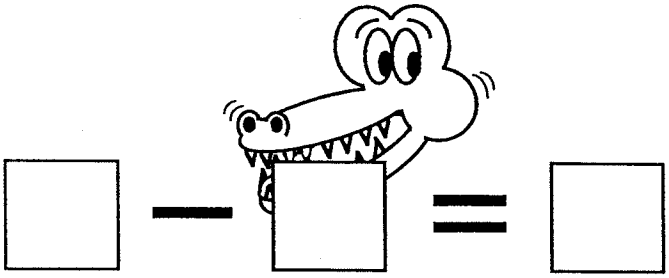


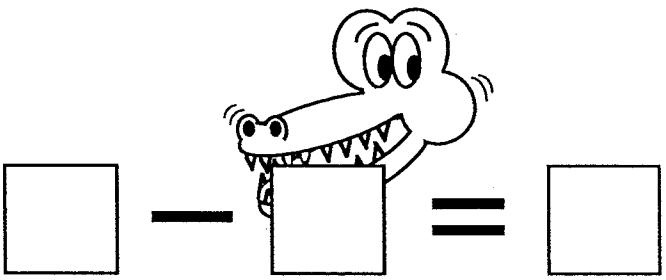


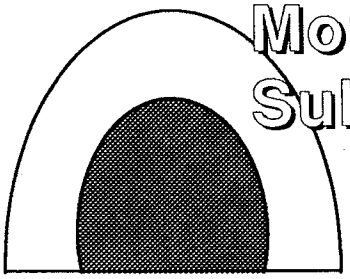






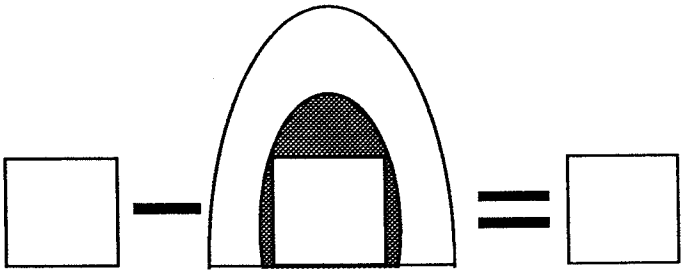


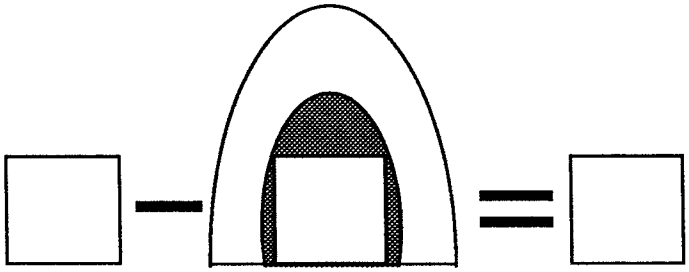


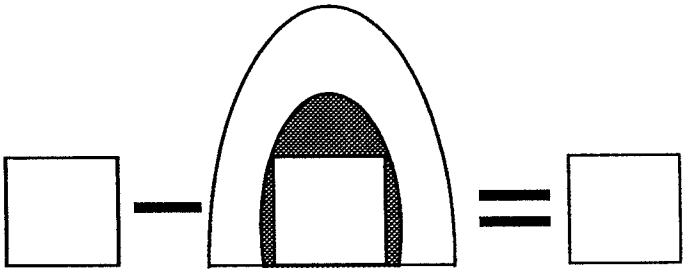


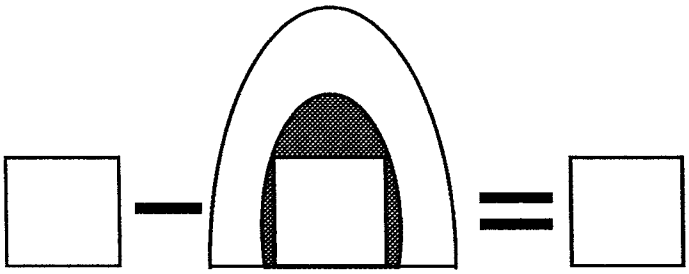
Mountain Subtraction

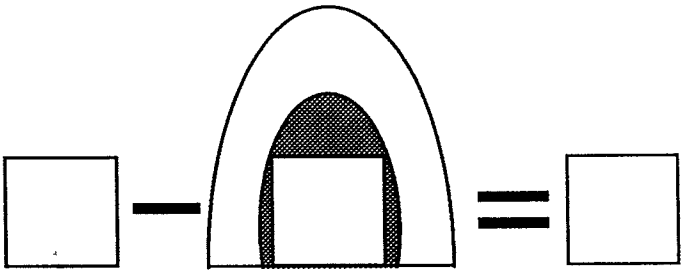
name _____

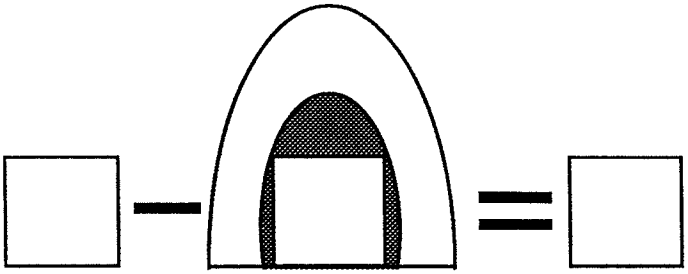


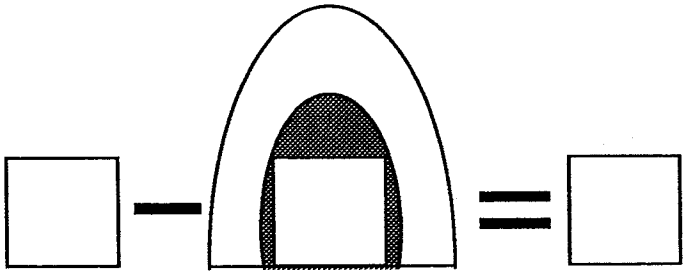












Subtract, Tell, Spin and Win
(spinner top)

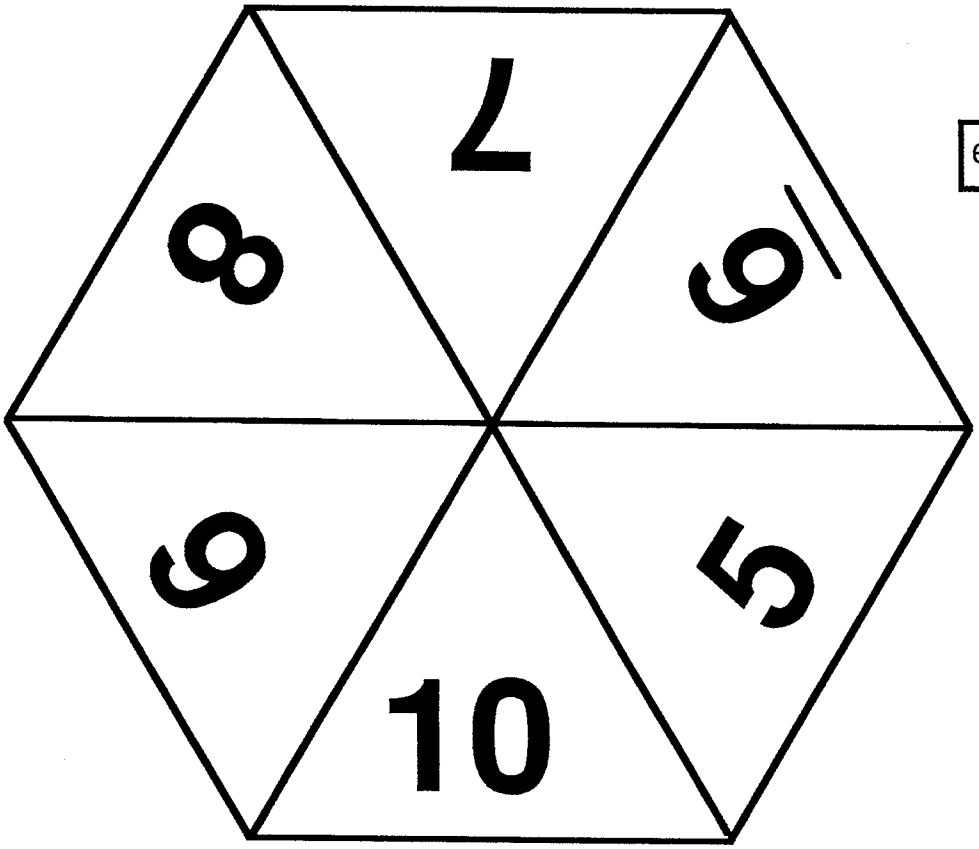
Add, Tell, Spin and Win
(spinner top)

Add and Think !

name _____

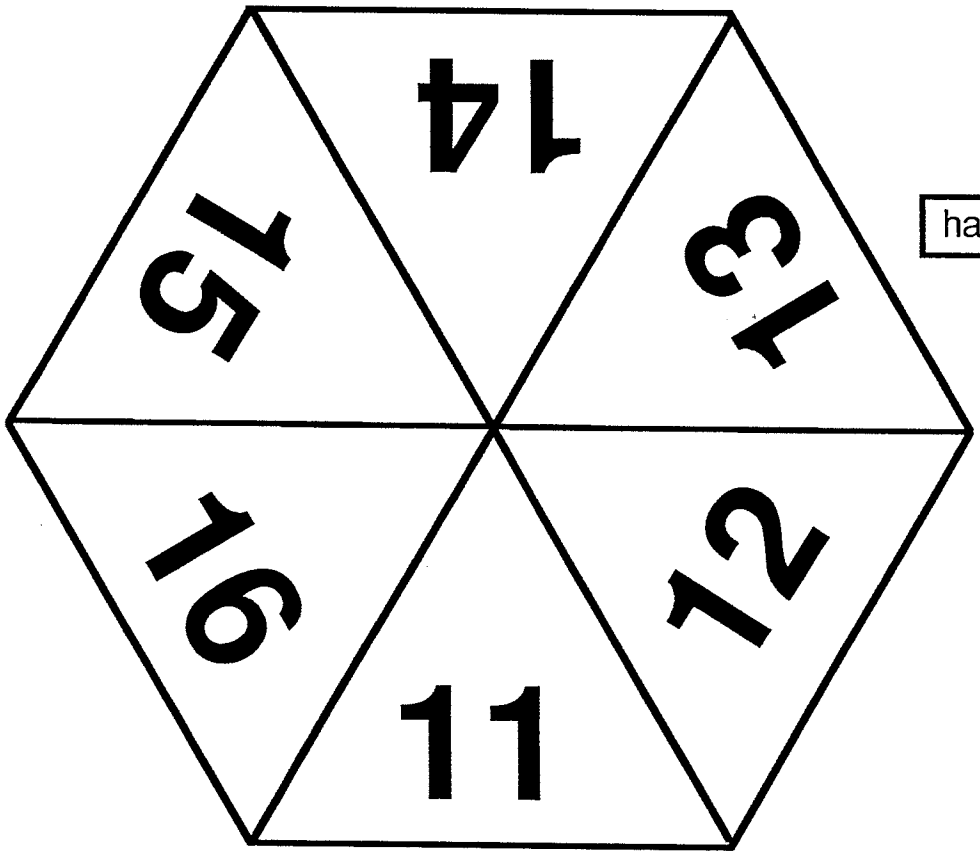
Add and Think !

name _____



easier level

Add and Think !



harder level

Addition Lotto

name _____

5	7	8	6
9	4	5	9
6	10	8	4
9	10	9	7

copy A

Addition Lotto

name _____

4	6	7	8
8	4	9	5
9	5	10	9
10	6	10	7

copy B

Addition Lotto

name _____

10	7	5	9
4	9	8	10
8	10	6	5
6	7	4	9

copy C

Addition Lotto

name _____

9	7	4	6
10	6	5	7
7	9	10	4
8	10	5	8

copy D

Subtraction Lotto

name _____

6	4	3	2
2	5	3	1
1	4	4	1
5	0	2	3

copy A

Subtraction Lotto

name _____

2	6	4	2
5	4	1	3
3	0	3	4
1	0	2	3

copy B

Subtraction Lotto

name _____

3	1	3	2
4	4	0	1
0	6	3	5
4	3	2	2

copy C

Subtraction Lotto

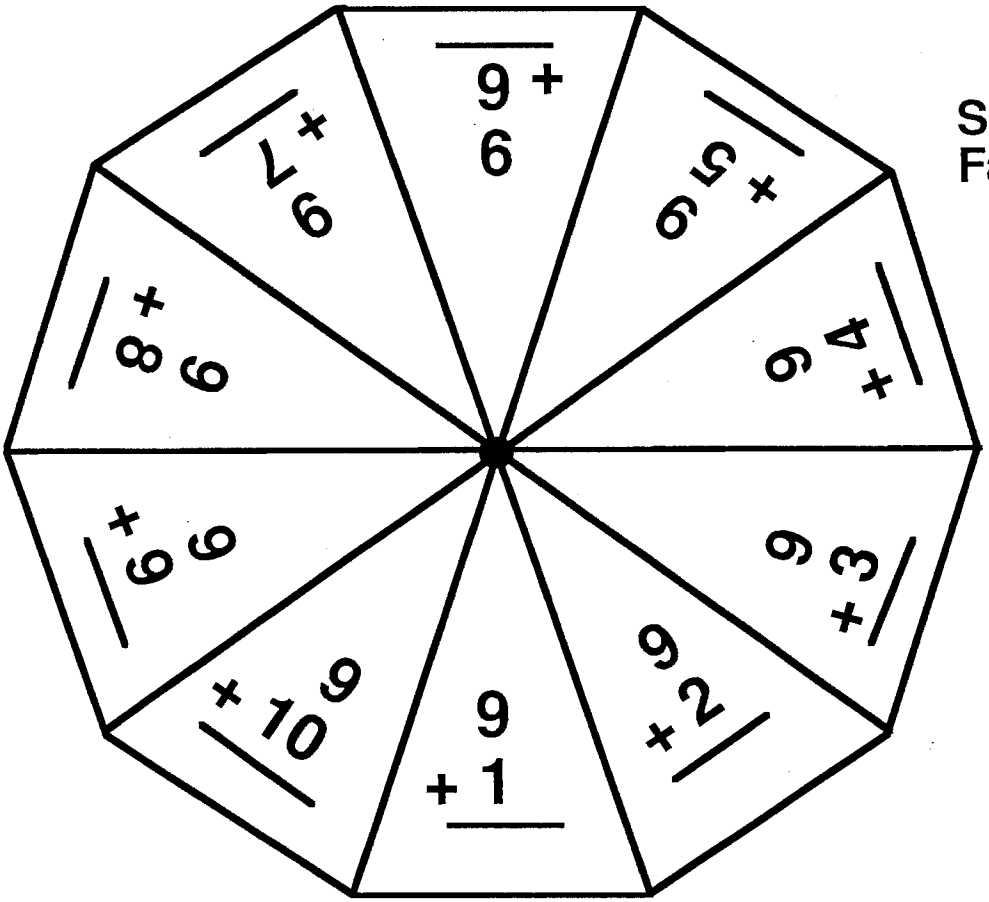
name _____

2	3	5	1
6	4	0	3
5	1	4	0
3	6	2	5

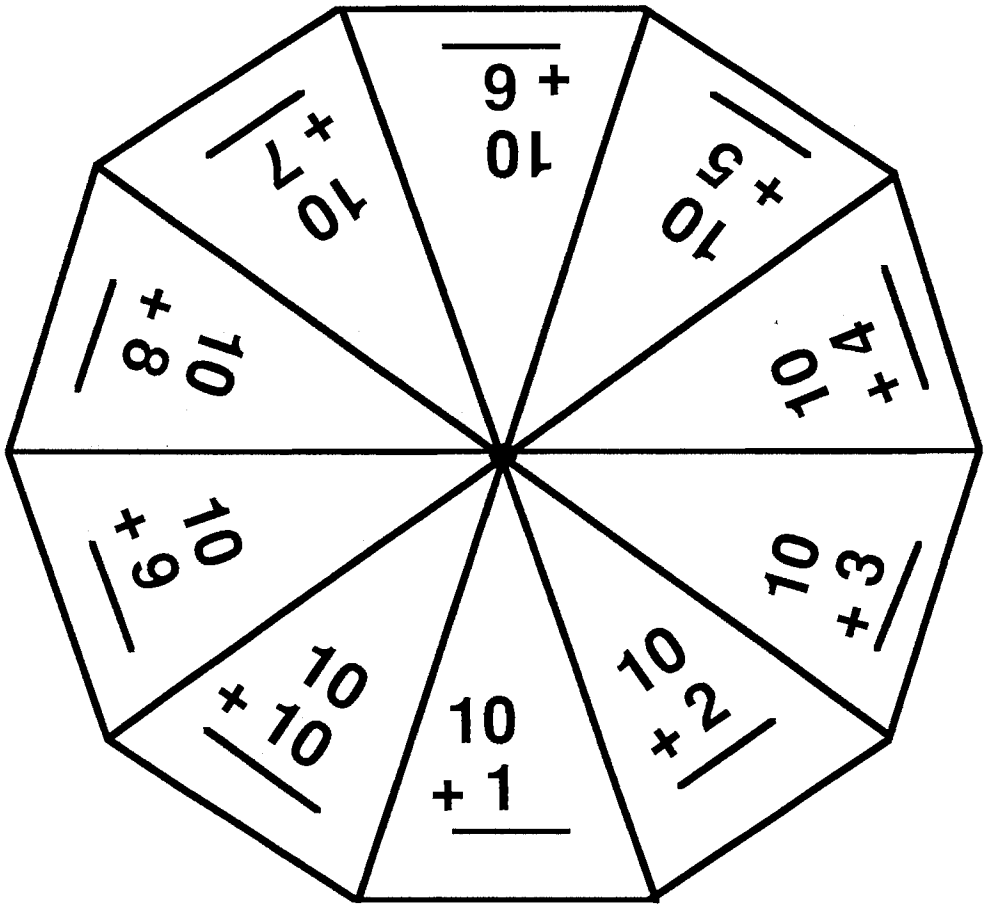
copy D

Fast 10's Record Sheet

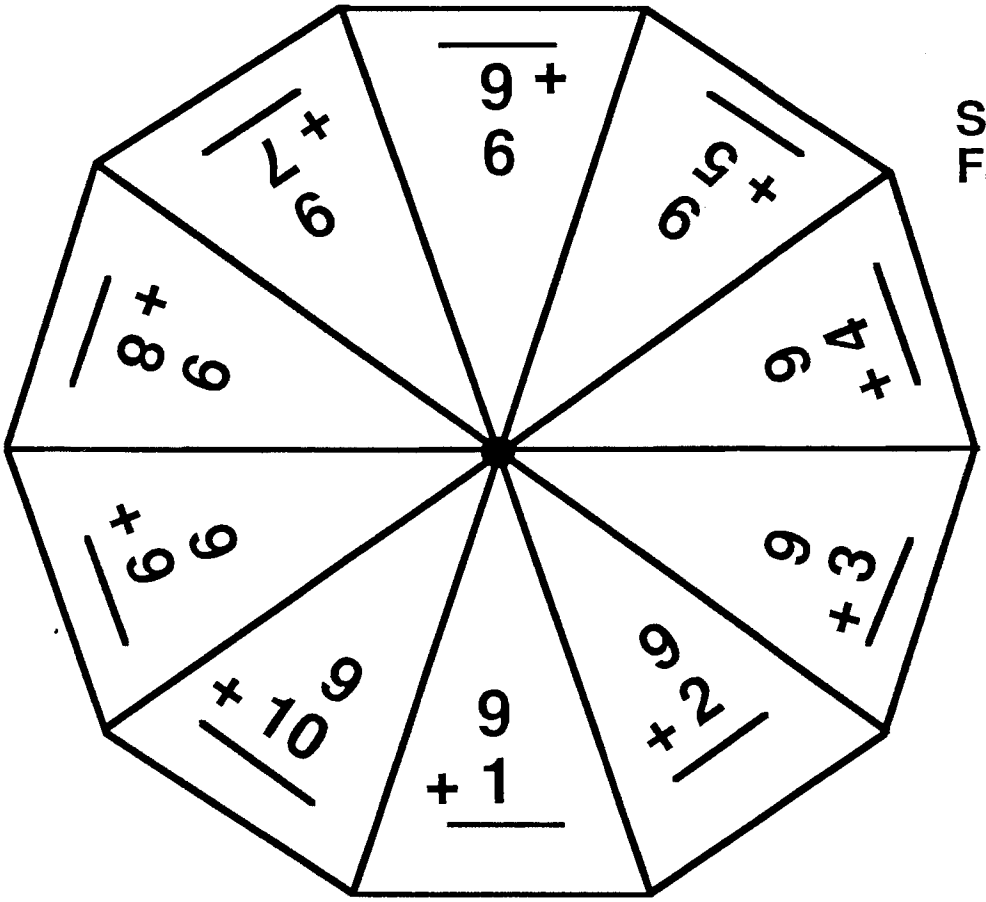
11	12	13	14	15	16	17	18	19	20



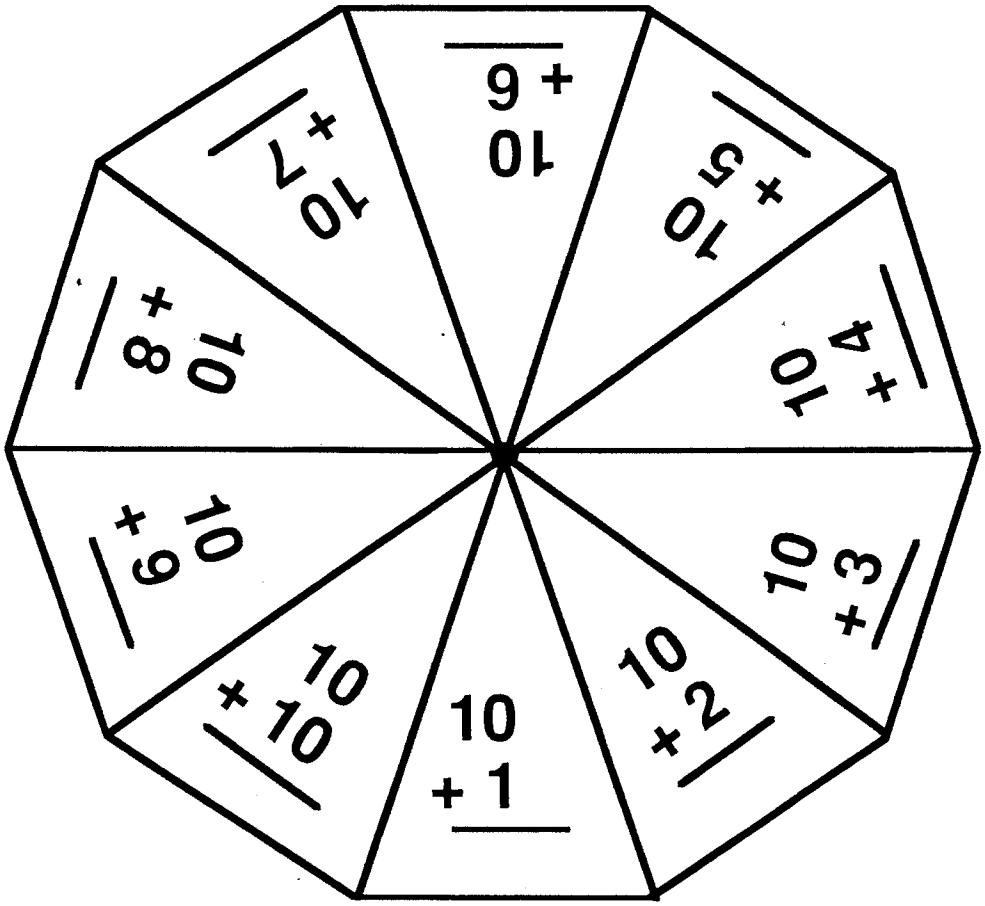
Spinner for Fast 9's



Spinner for Fast 10's



Spinner for Fast 9's



Spinner for Fast 10's

Fast 9's Record Sheet

10	11	12	13	14	15	16	17	18	19

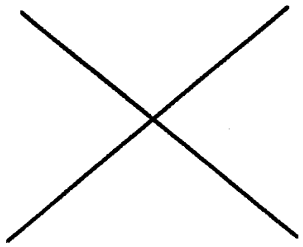
Fast 9's and *Fast 10's* Dice Toss

______________________ name

Fast 9's	*Fast 10's*

Doubles, Neighbors, Nines, Tens, and Leftovers Dice Toss

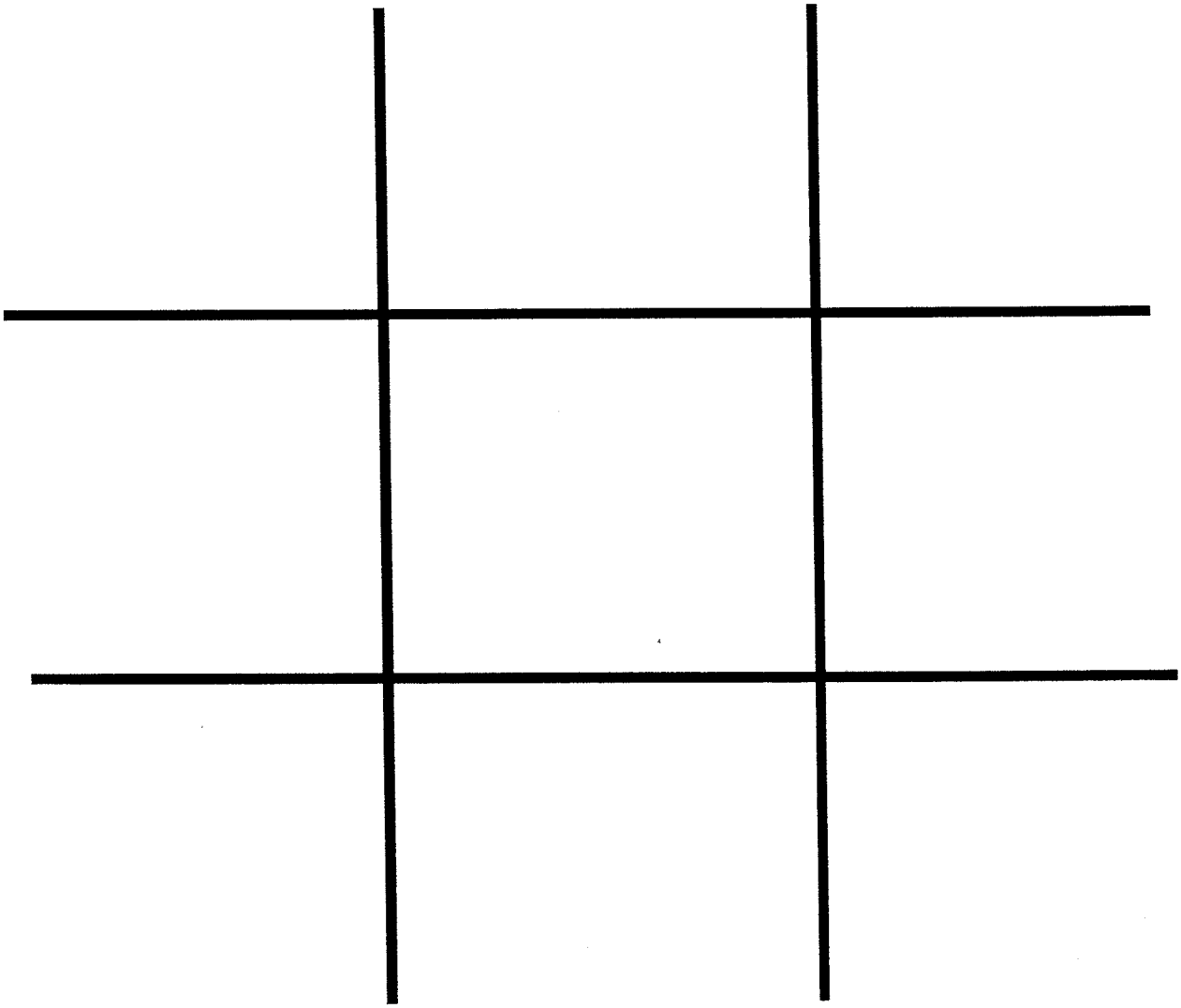
name _____

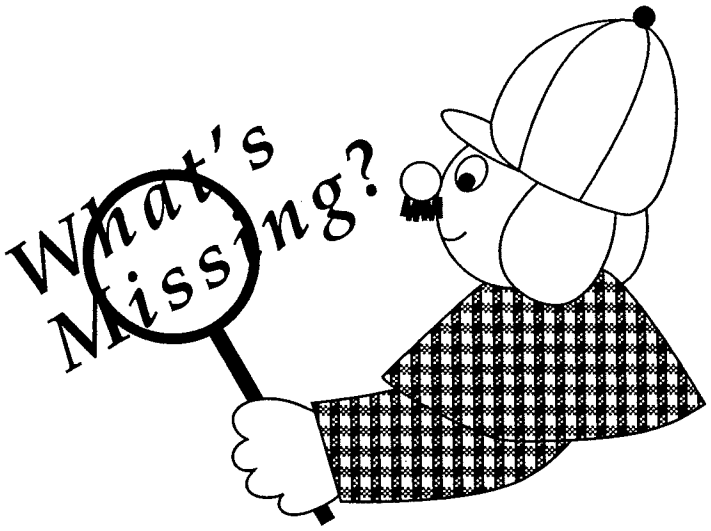
Round 4					
Round 3					
Round 2					
Round 1					
	Fast 9's	Fast 10's	Doubles	Neighbors	Leftovers

Tic - Tac - Toe

X = _____

O = _____





name _____

first spin

?

second spin

first spin

?

second spin

first spin

?

second spin

first spin

?

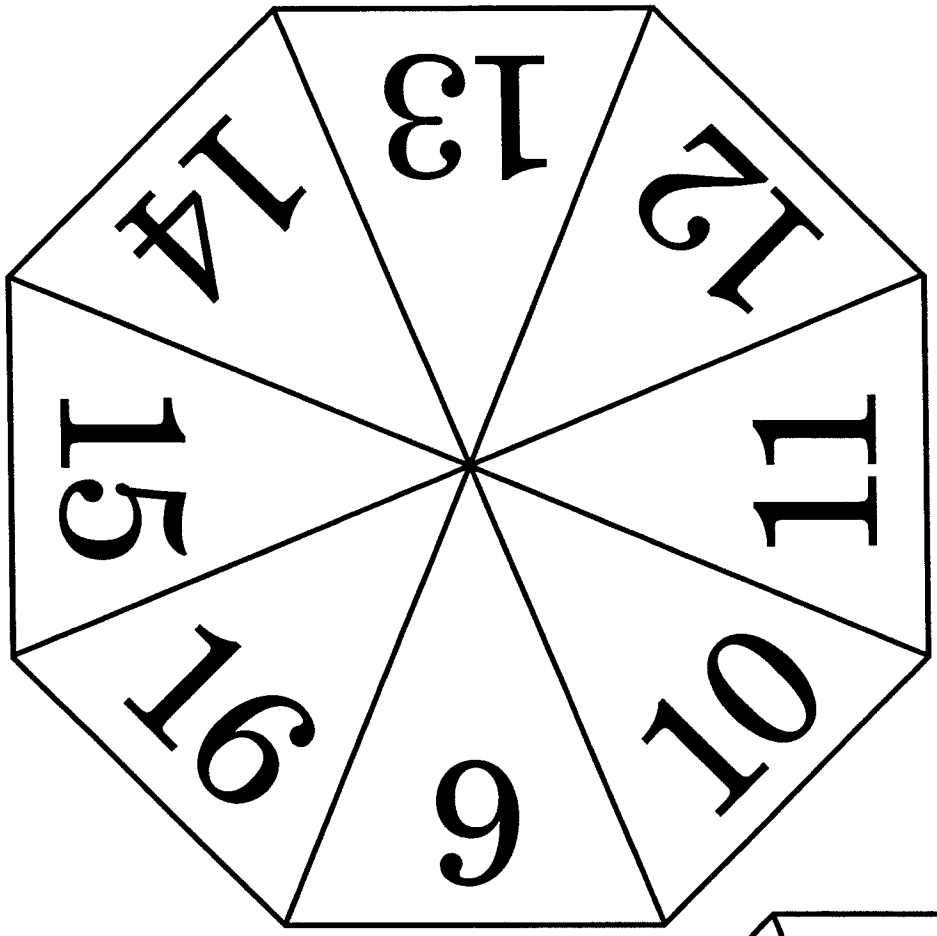
second spin

first spin

?

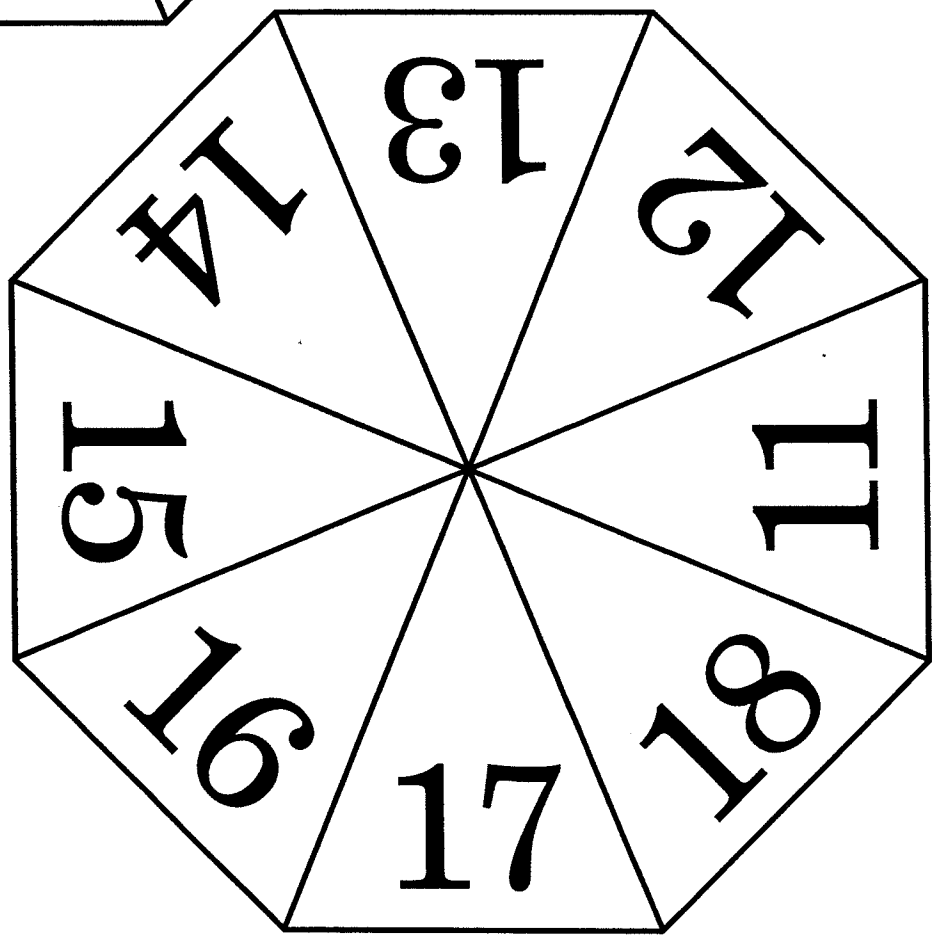
second spin

What's Missing? Spinner Tops



First

Second



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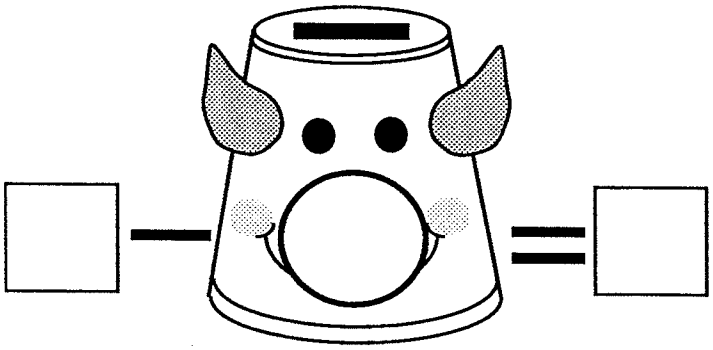

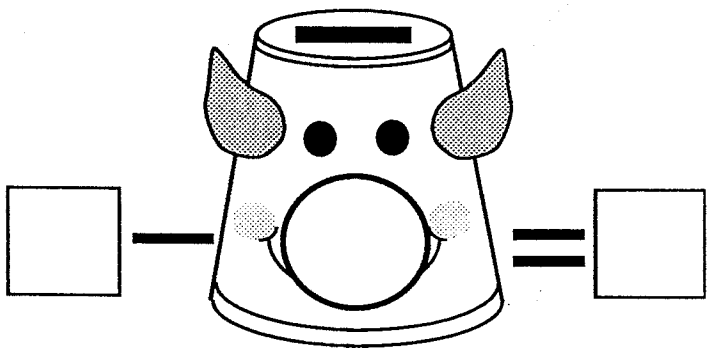

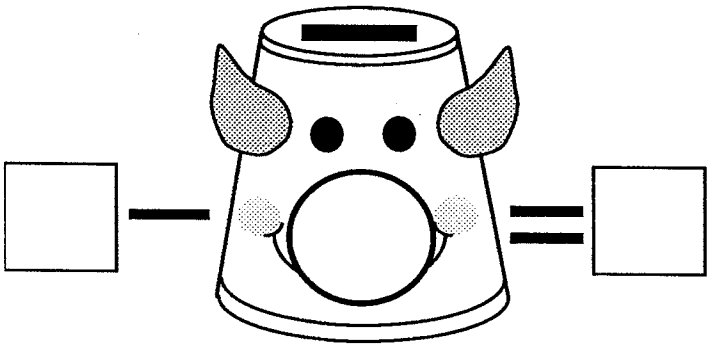

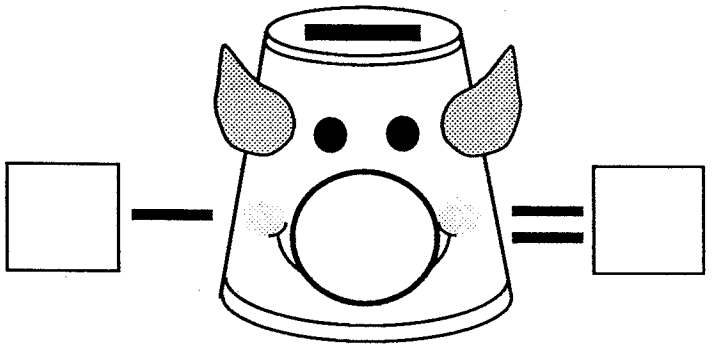

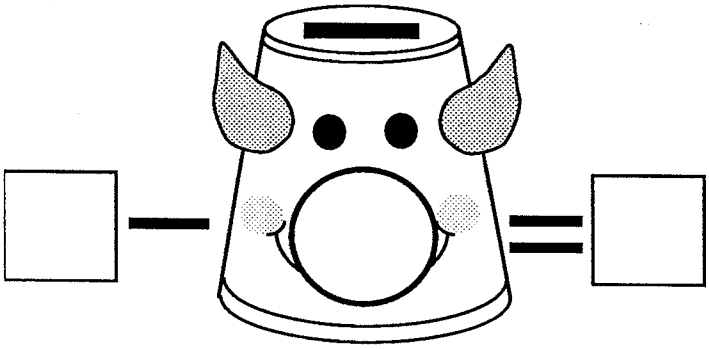

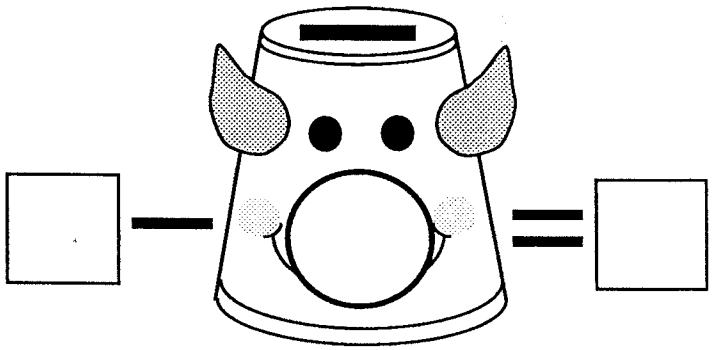

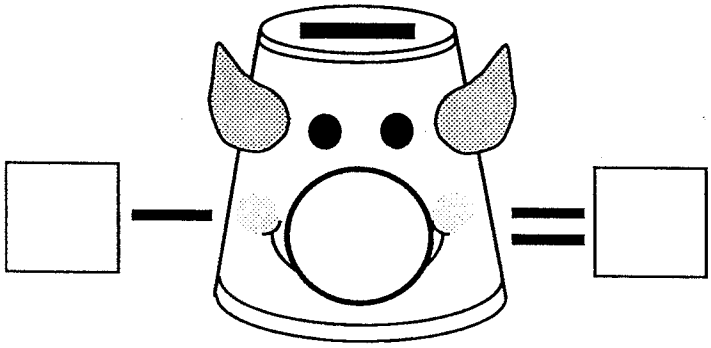

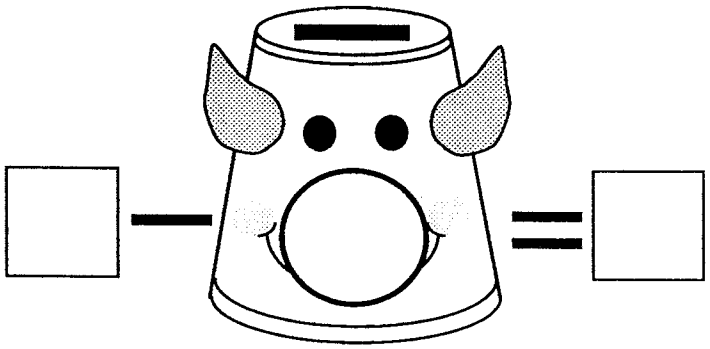

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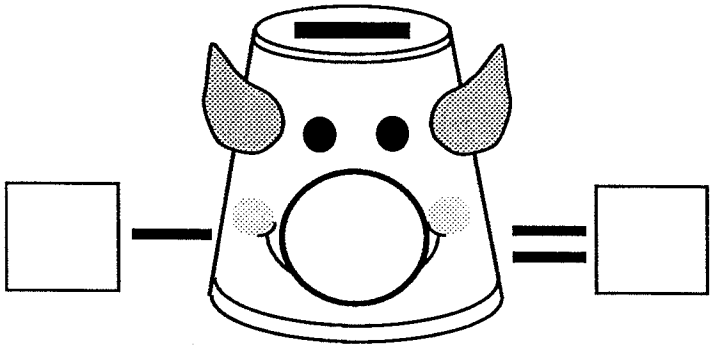
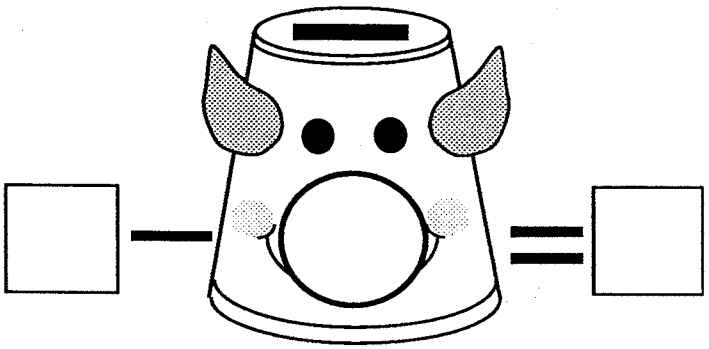
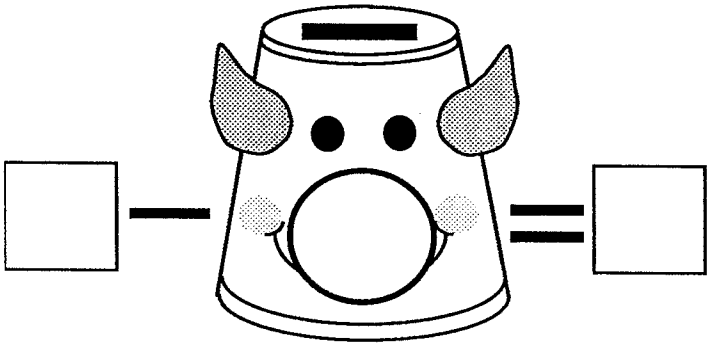
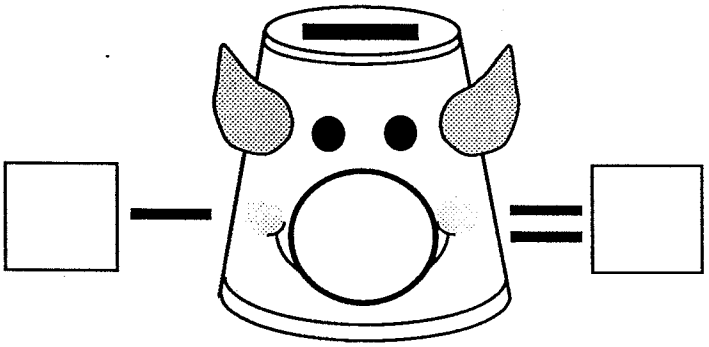
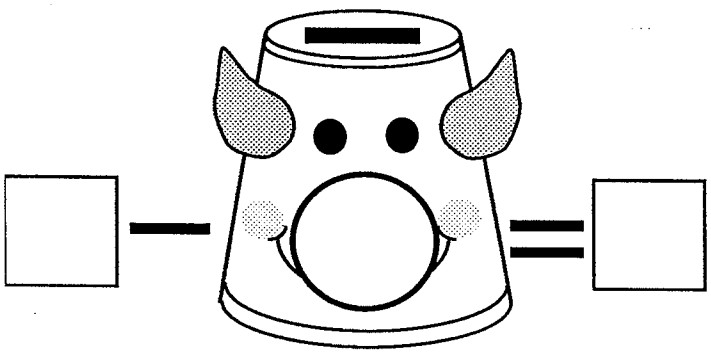
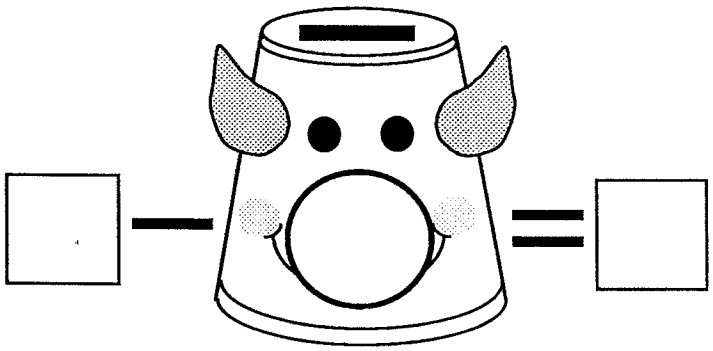


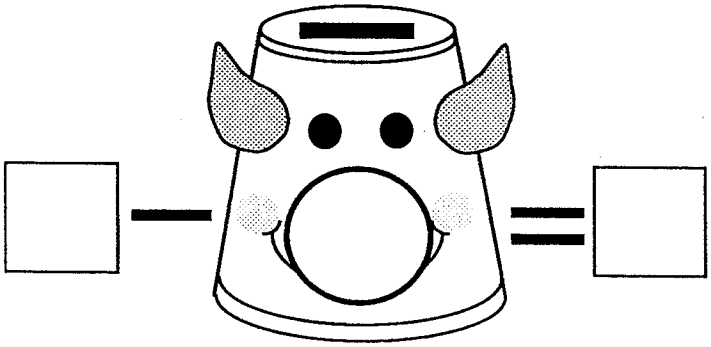


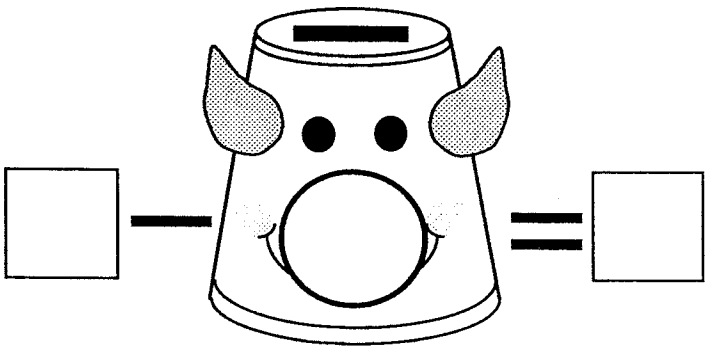




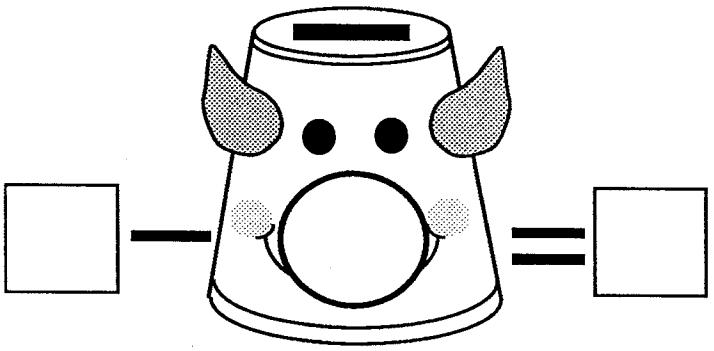


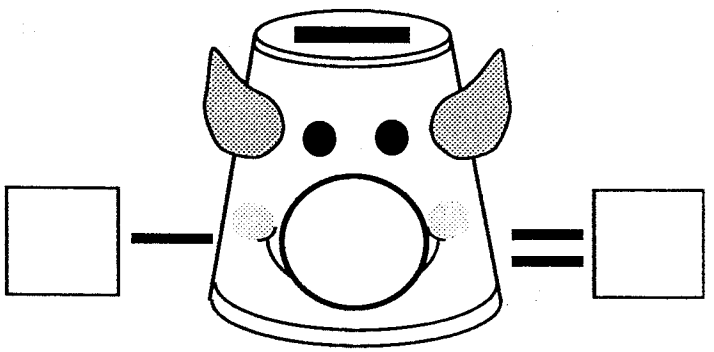


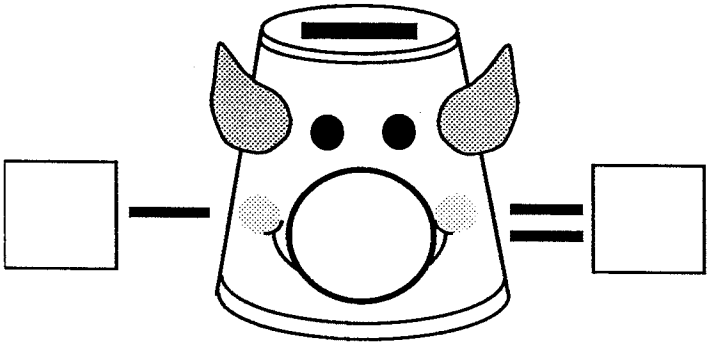


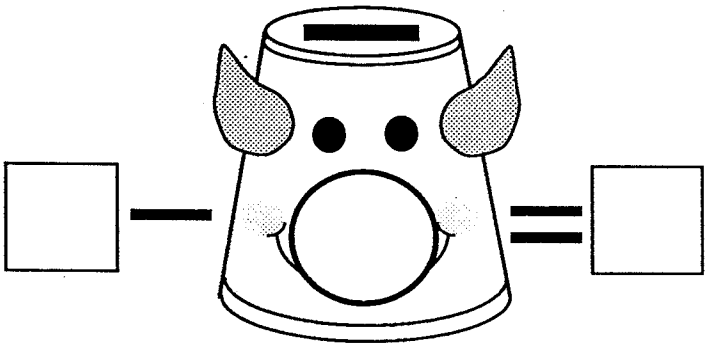


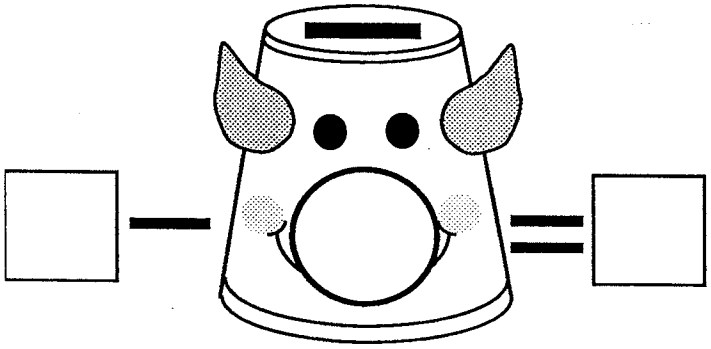
Piggy Bank Subtraction

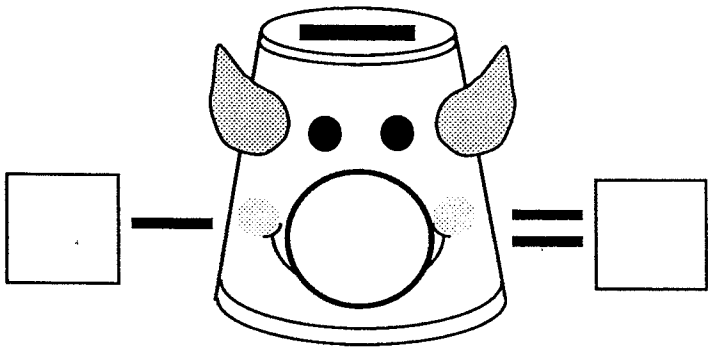


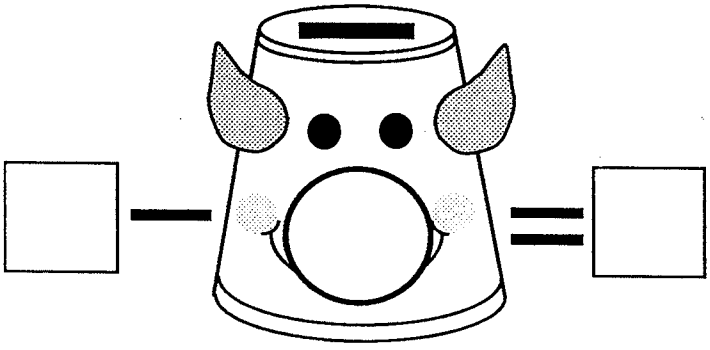


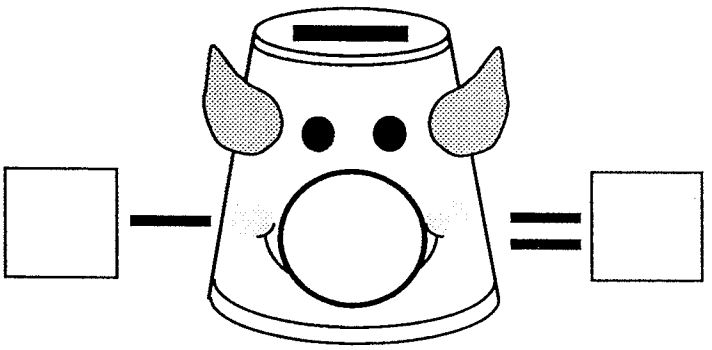




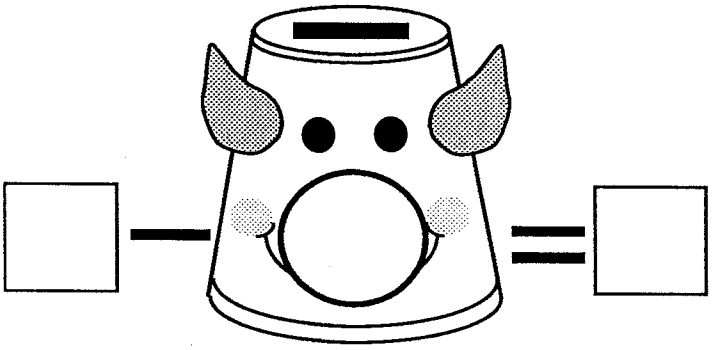


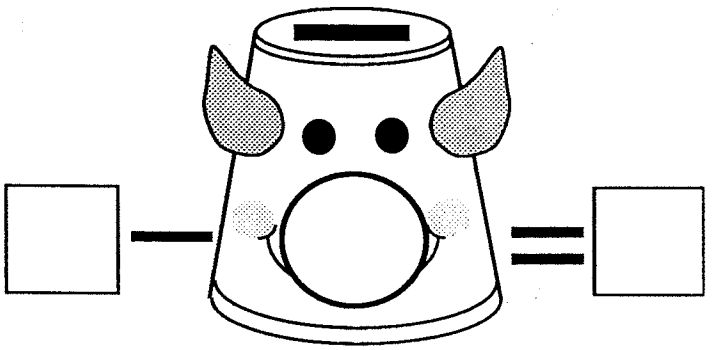


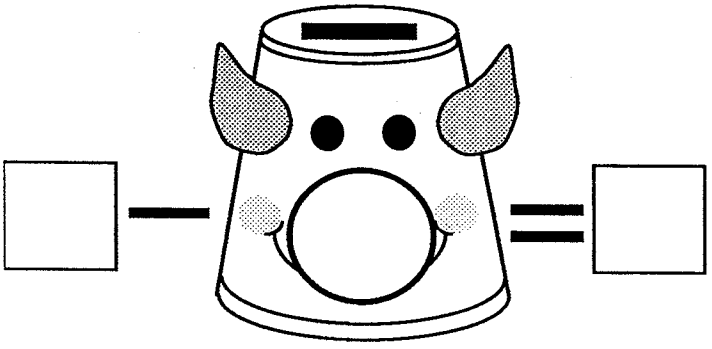


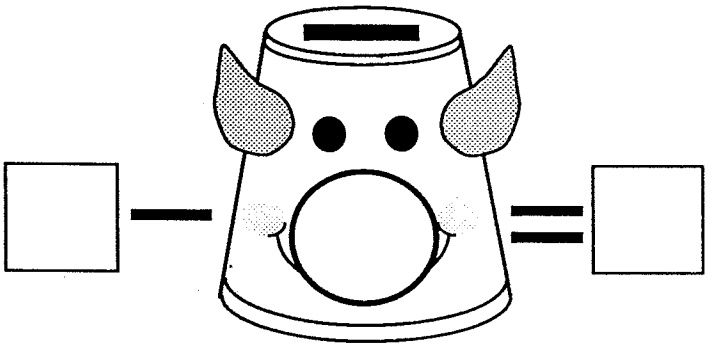


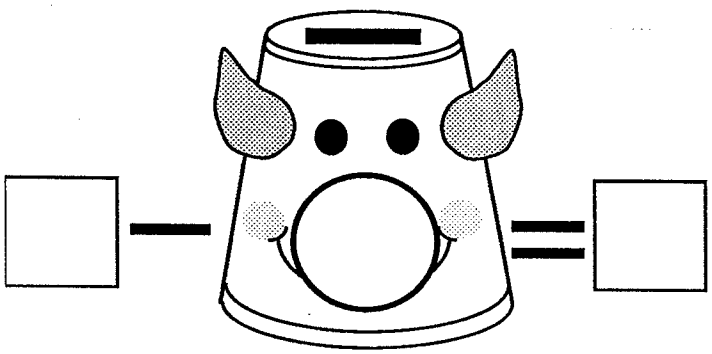
Piggy Bank Subtraction

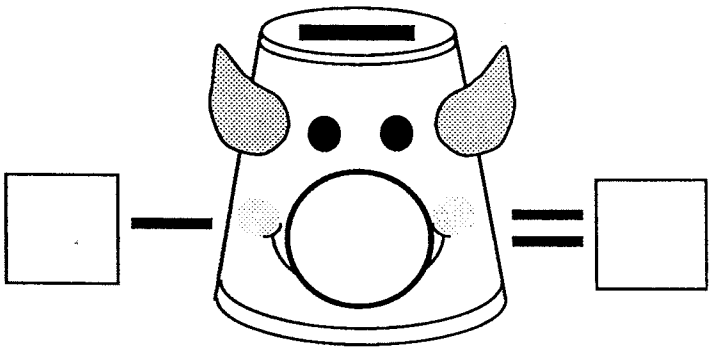


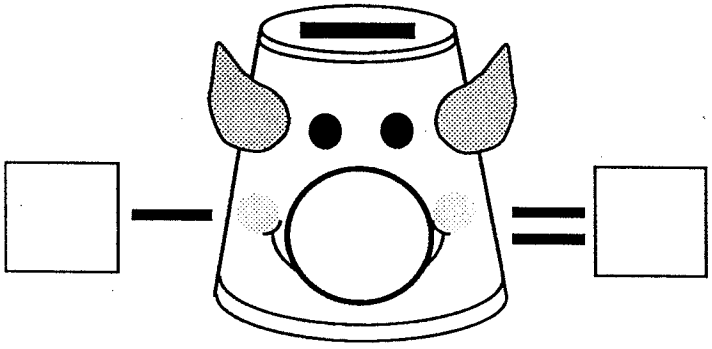


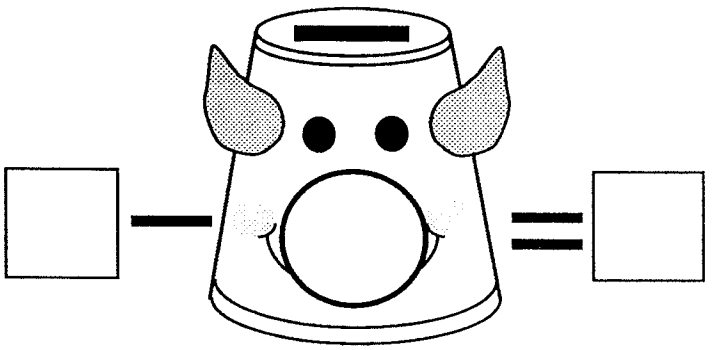




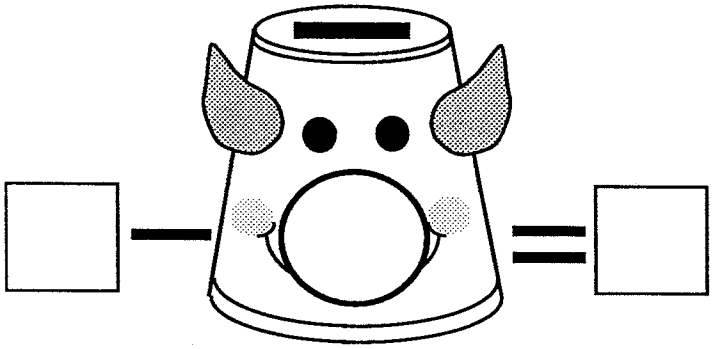


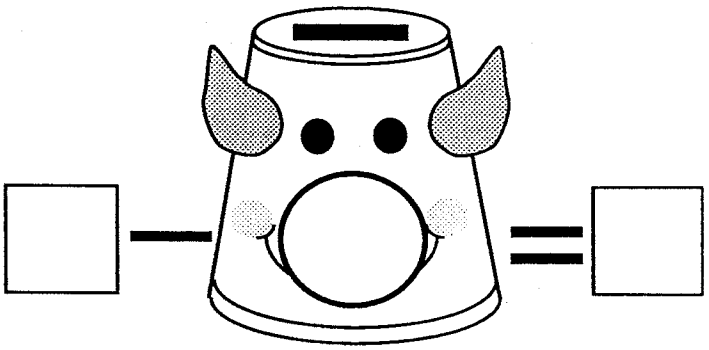


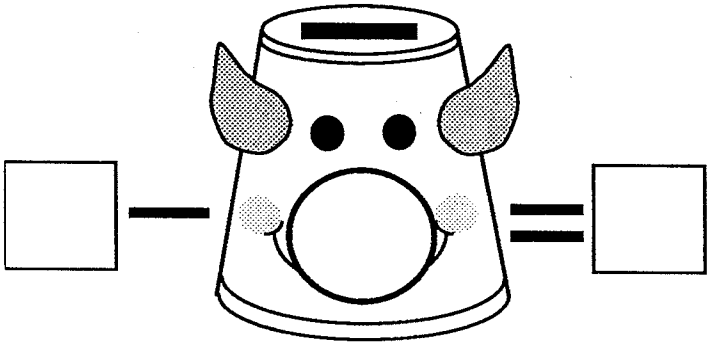


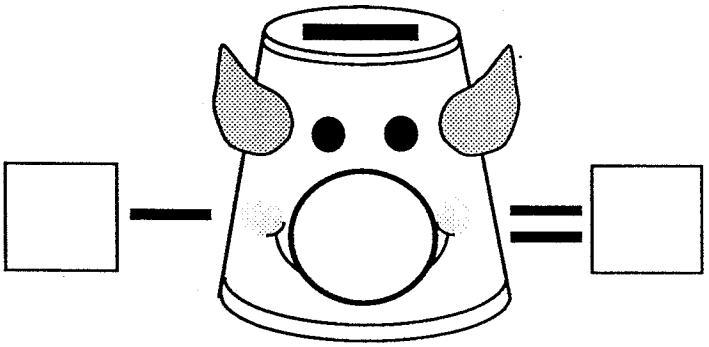


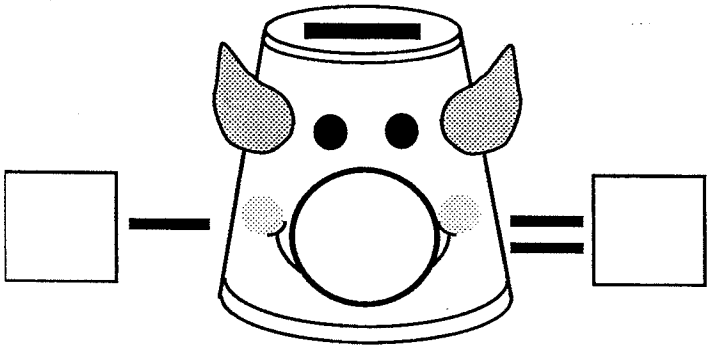
Piggy Bank Subtraction

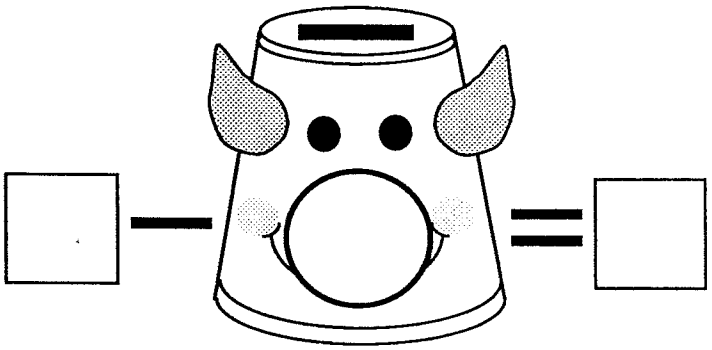


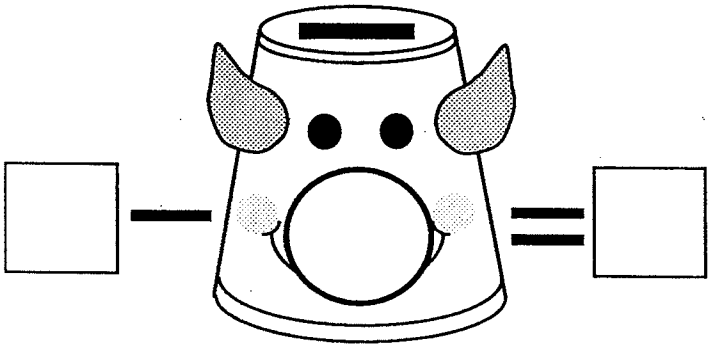


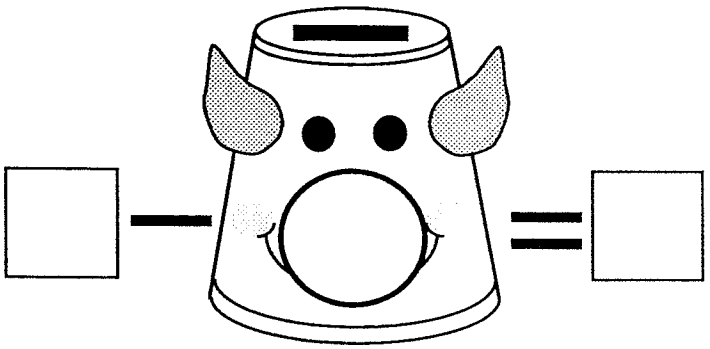




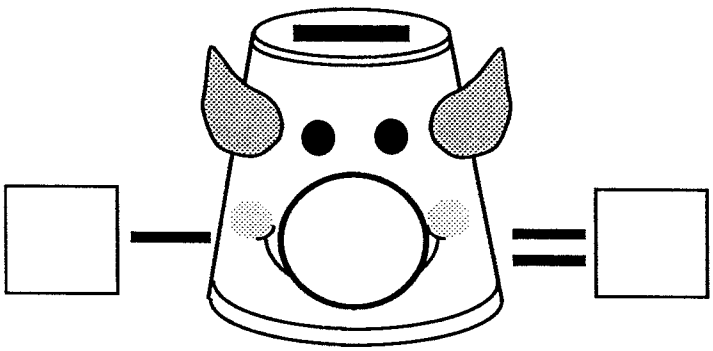


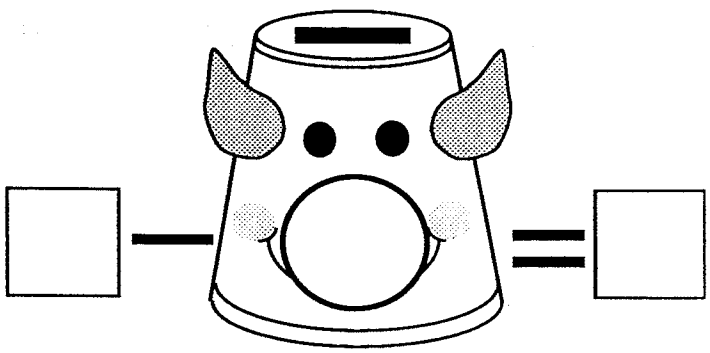


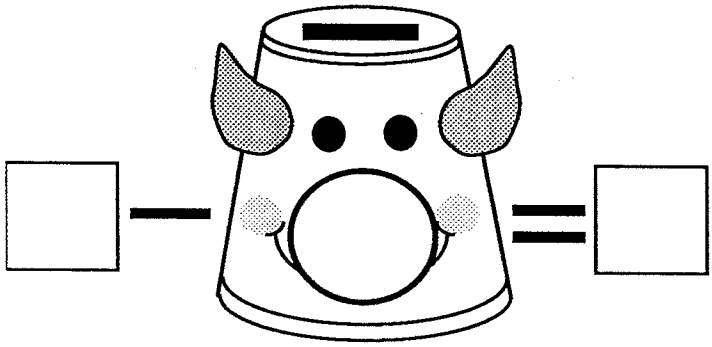


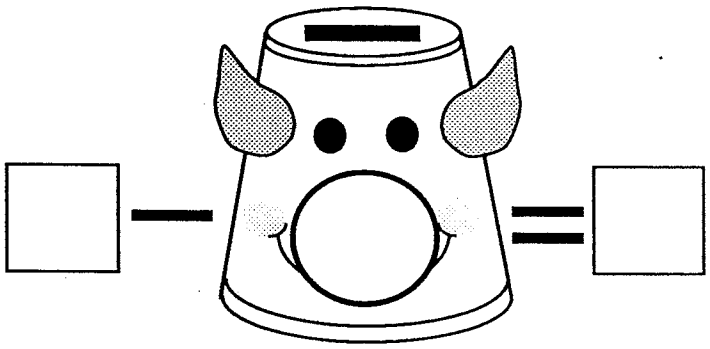


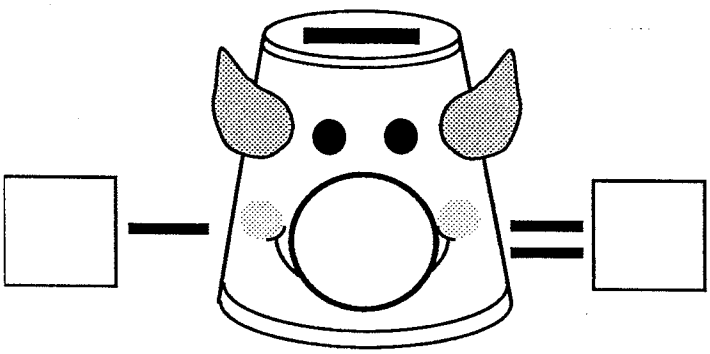
Piggy Bank Subtraction

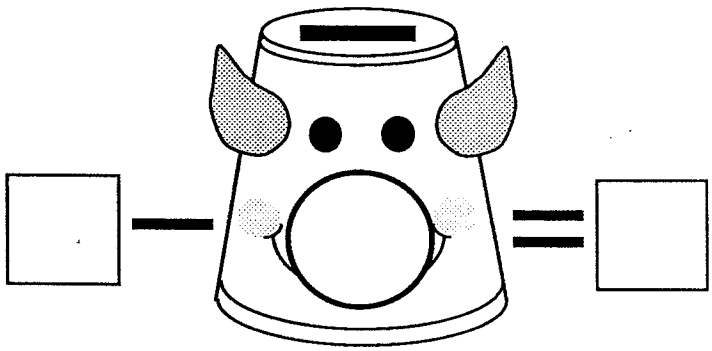


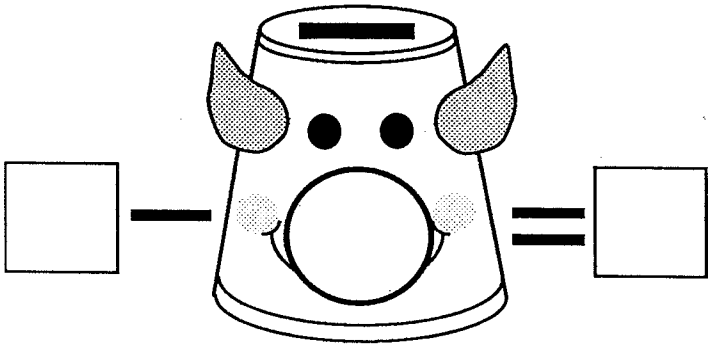


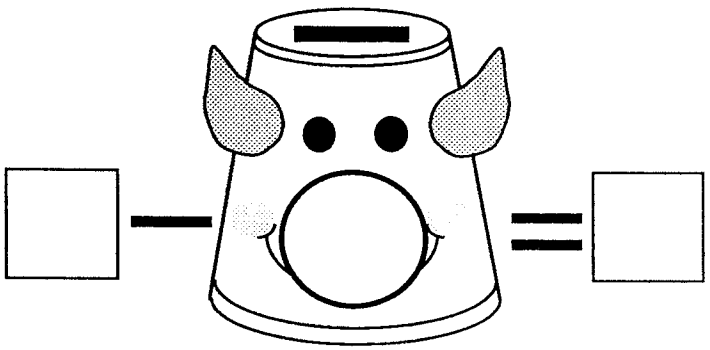




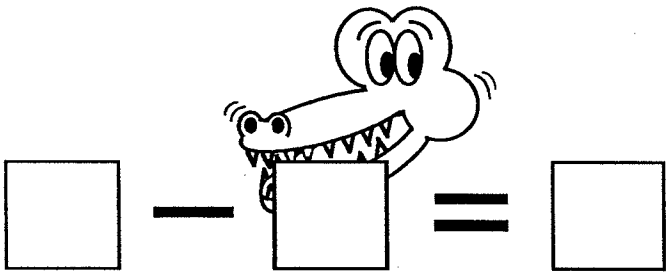


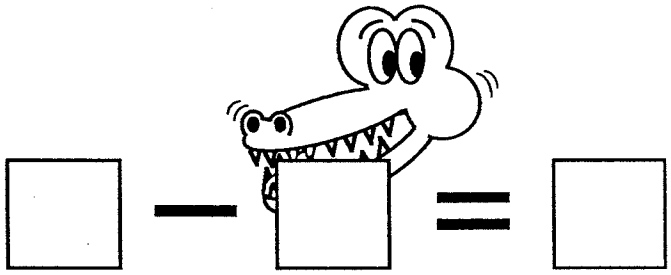


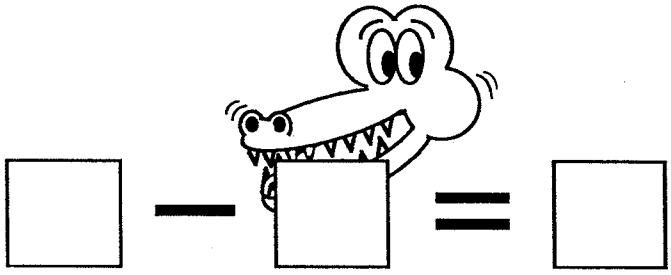


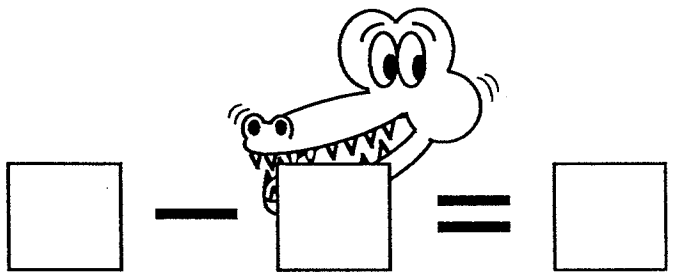


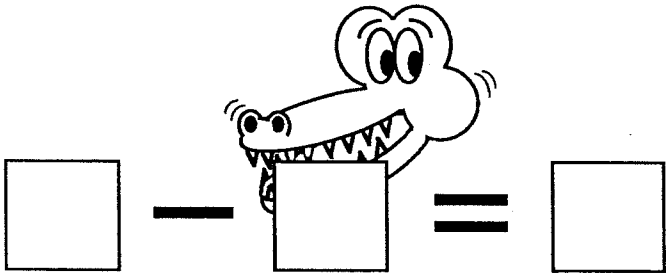
Alligator Subtraction

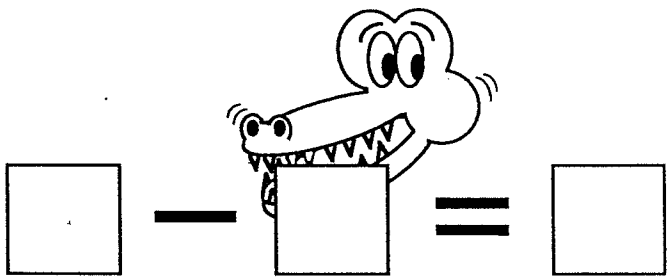


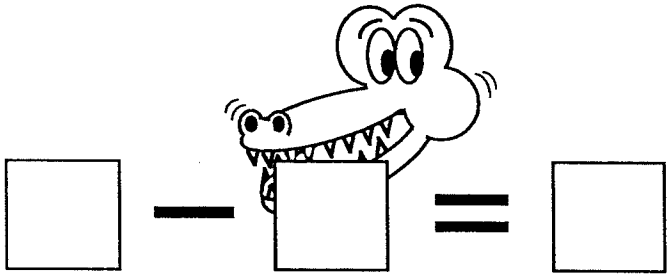


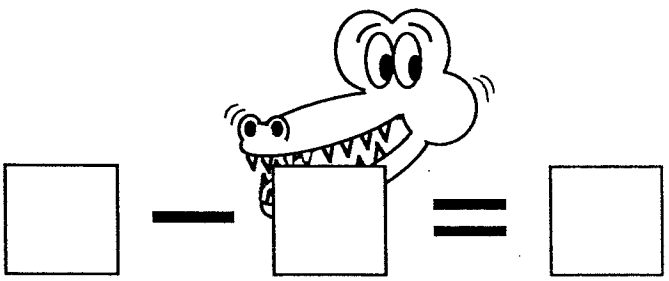




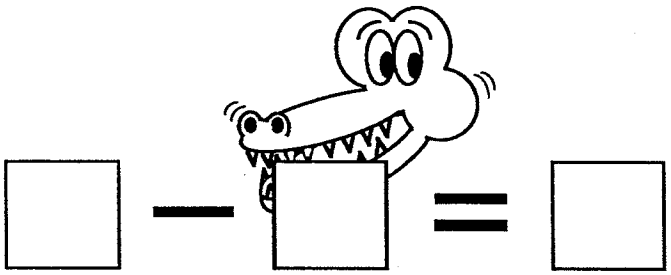


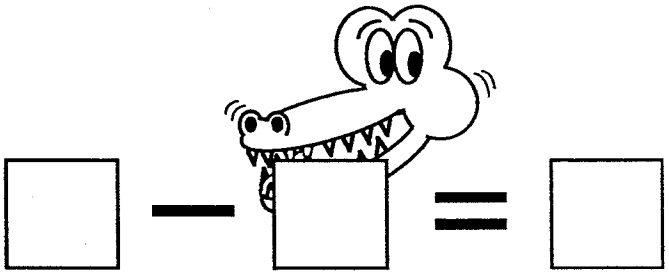


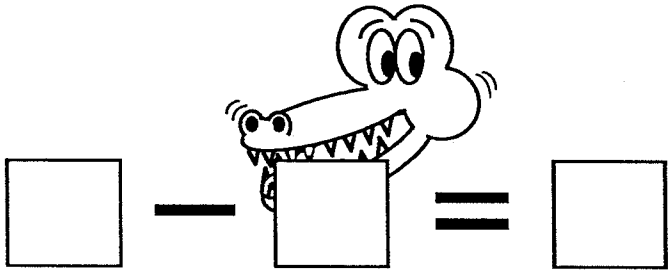


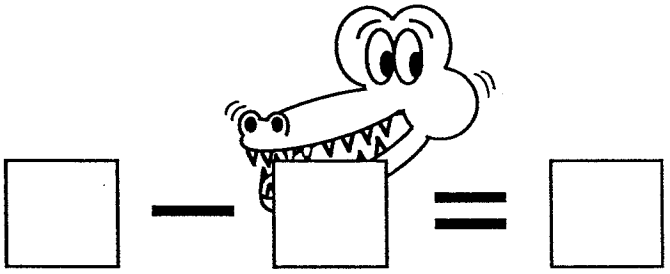


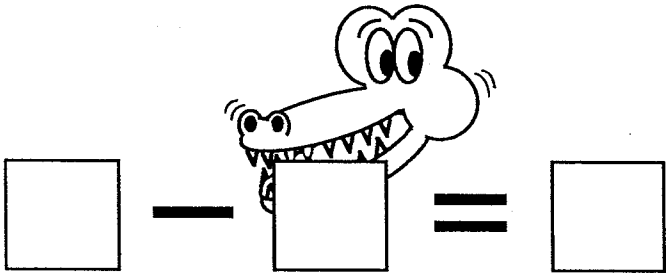
Alligator Subtraction

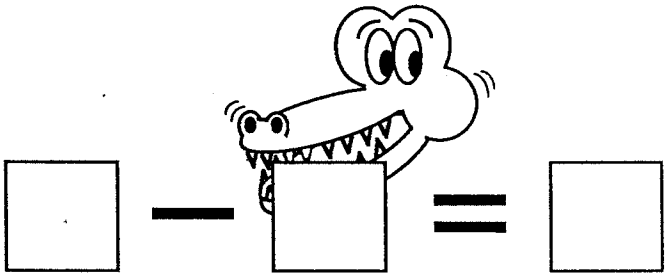


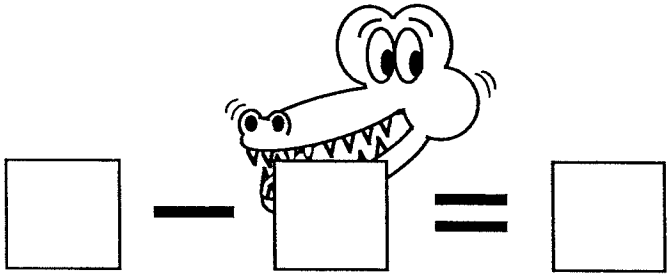


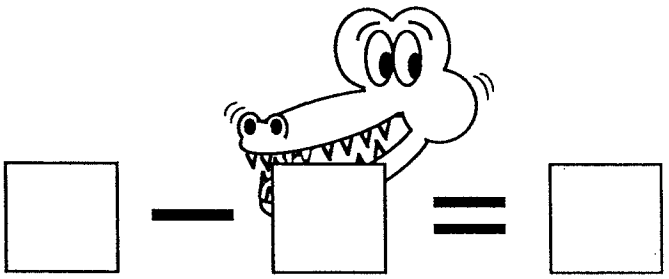




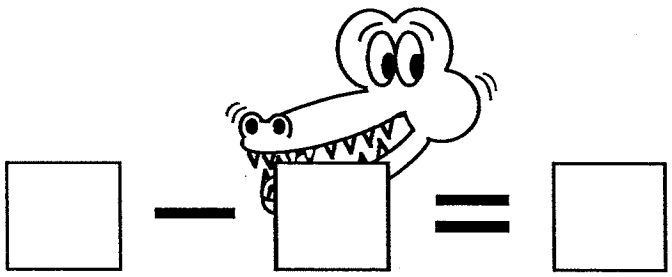


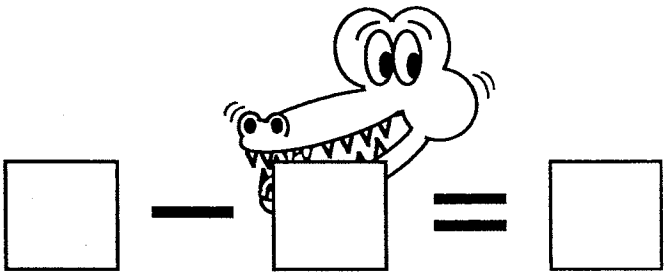


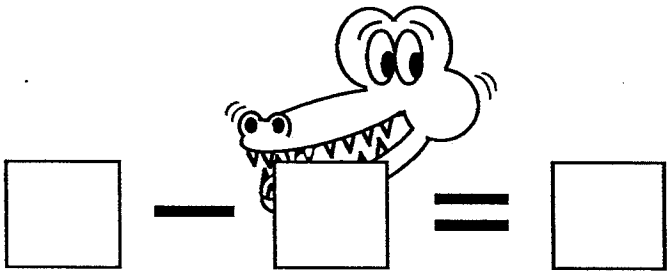


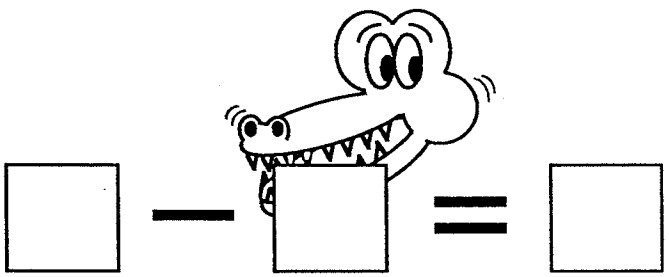


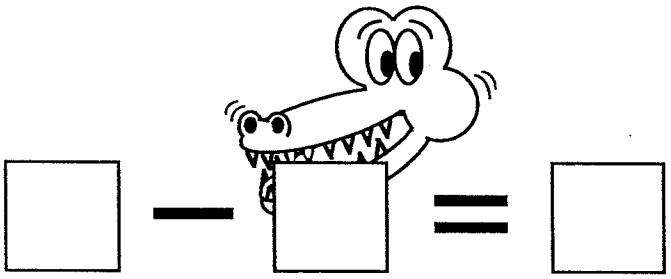
Alligator Subtraction

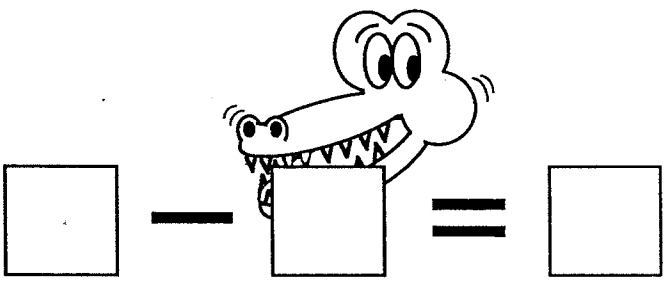


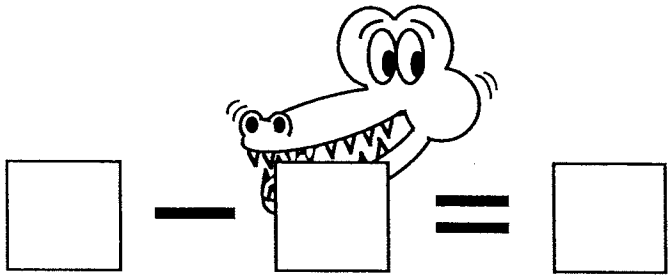


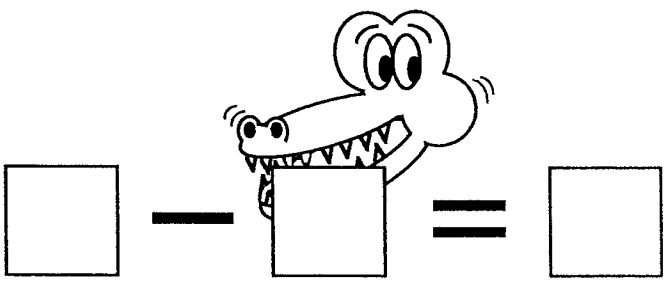




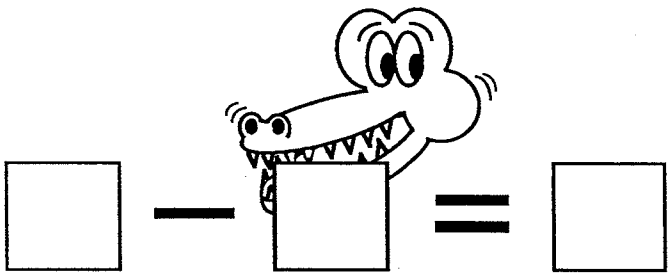


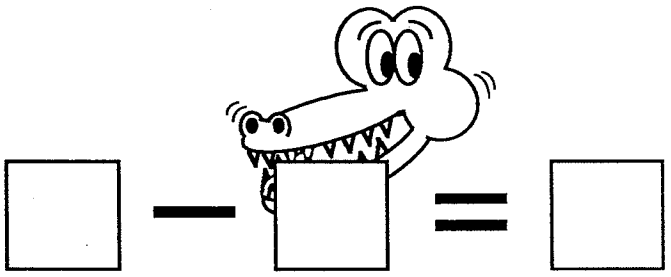


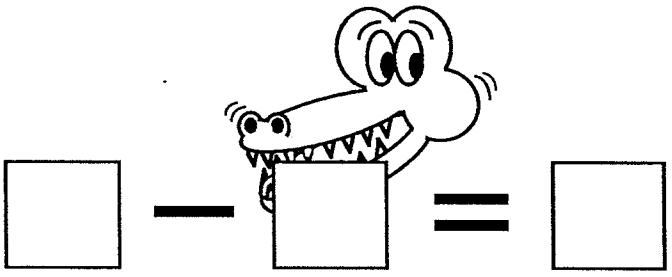


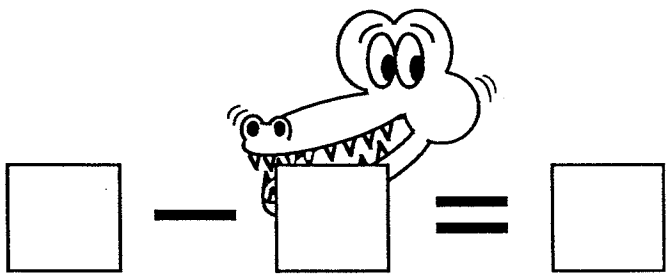


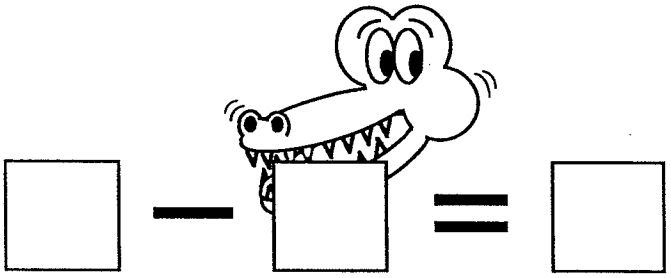
Alligator Subtraction

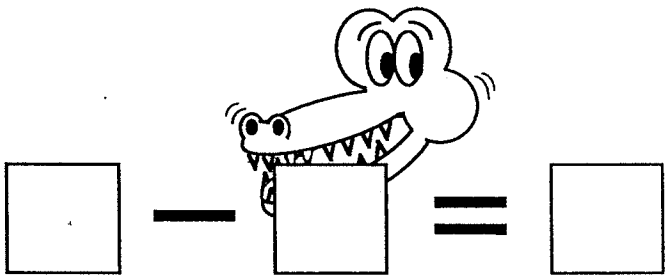


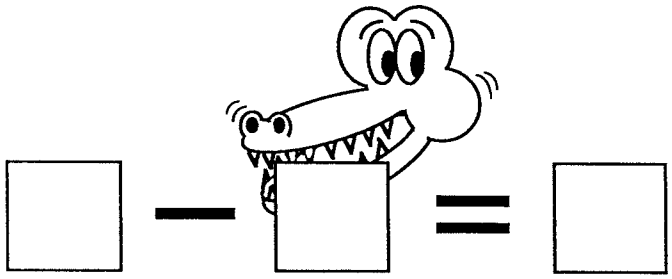


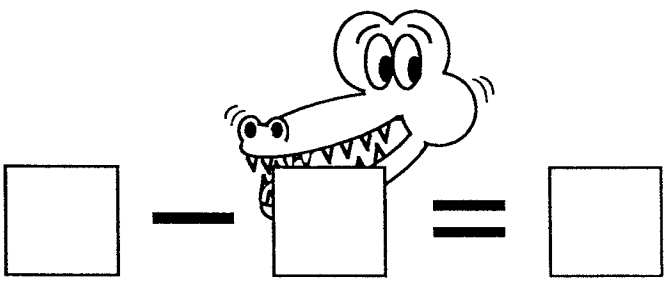




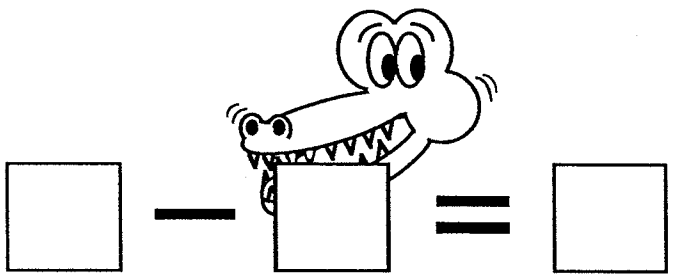


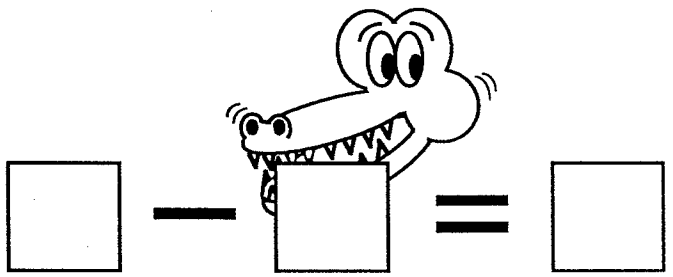


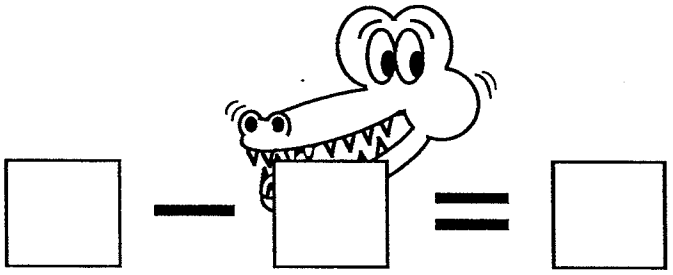


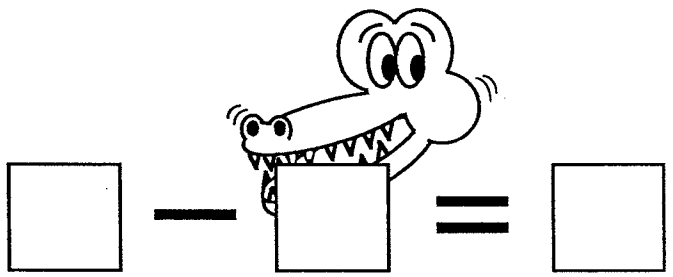


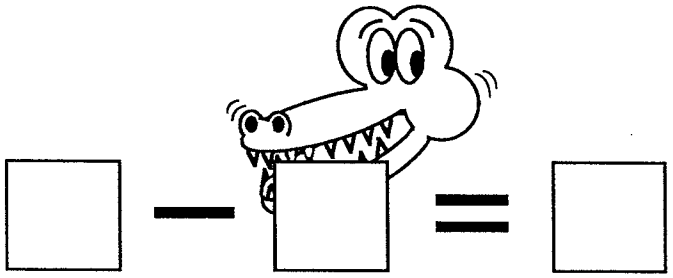
Alligator Subtraction

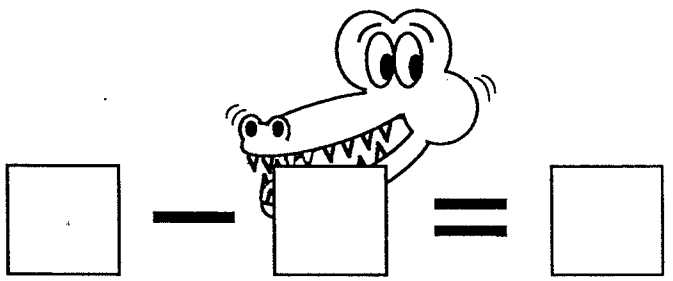


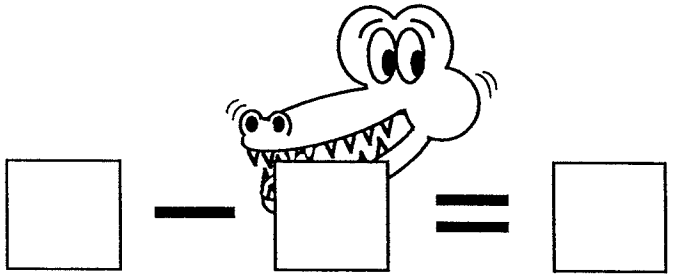


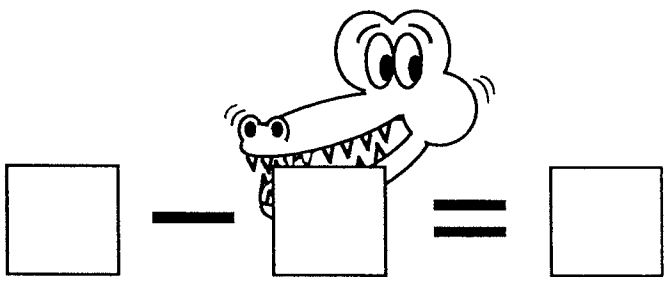




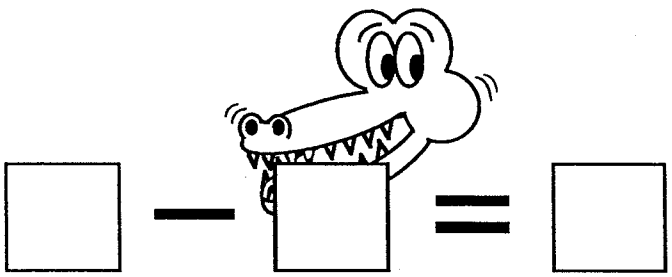


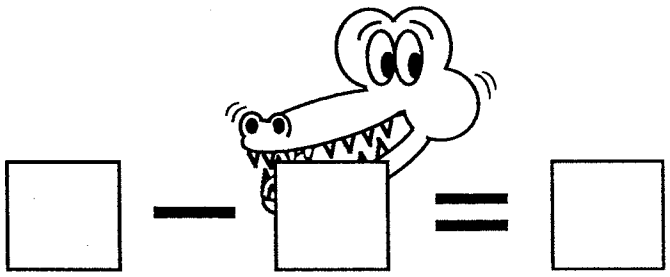


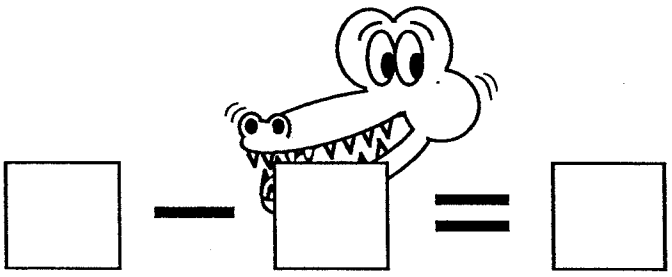


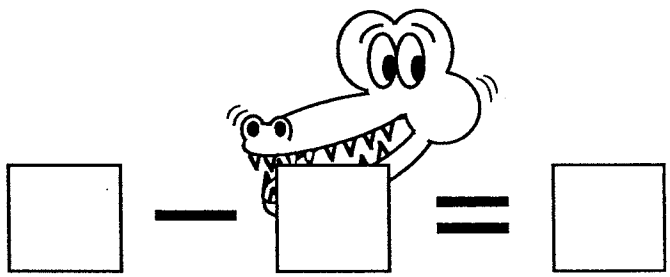


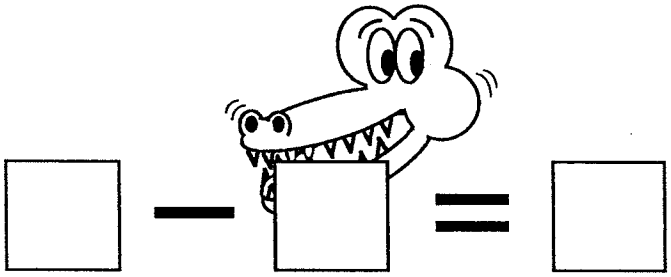
Alligator Subtraction

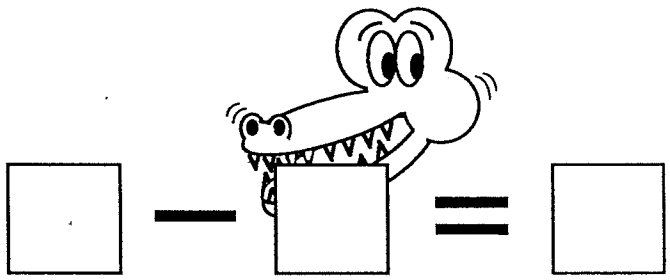


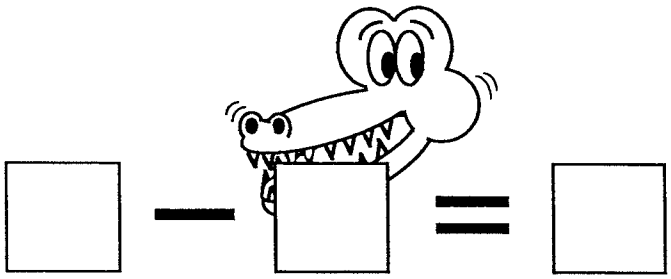


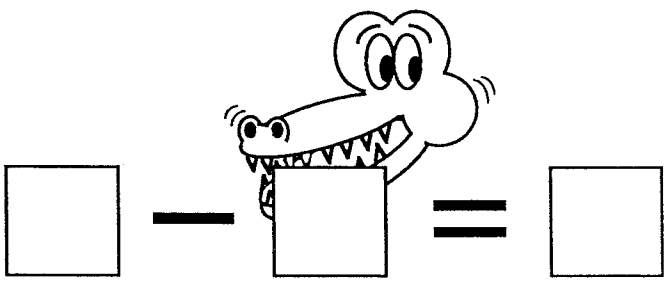




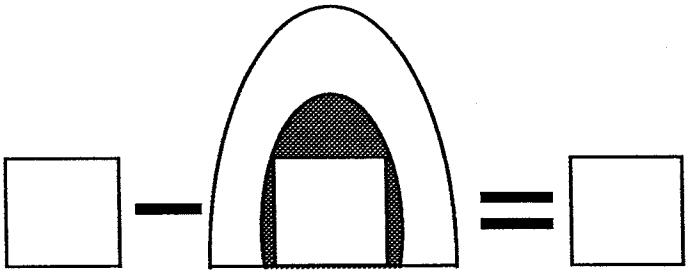


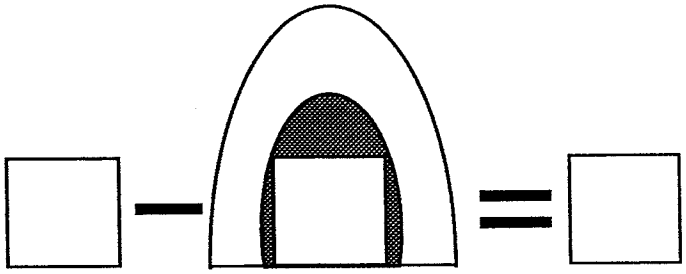


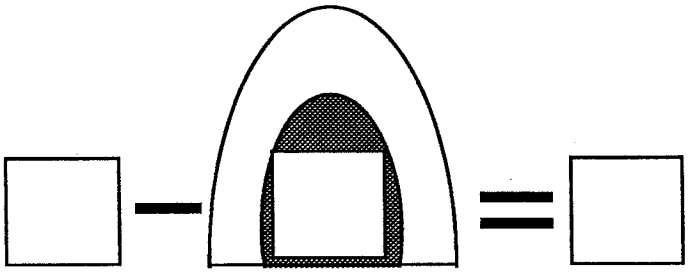


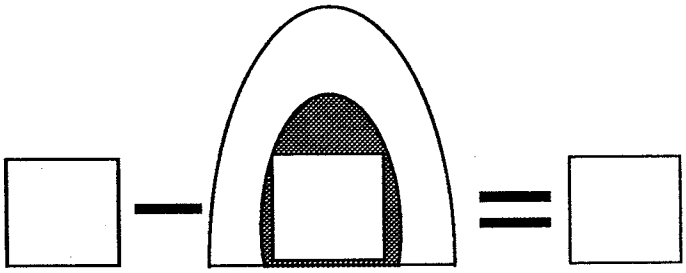


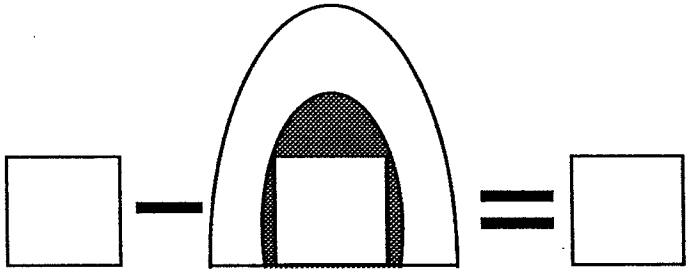
Mountain Subtraction

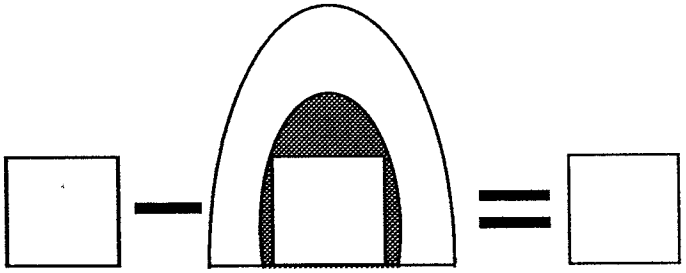


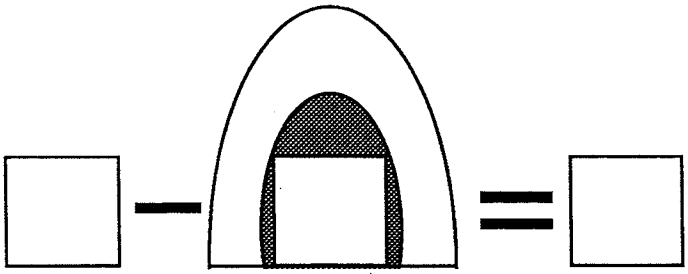


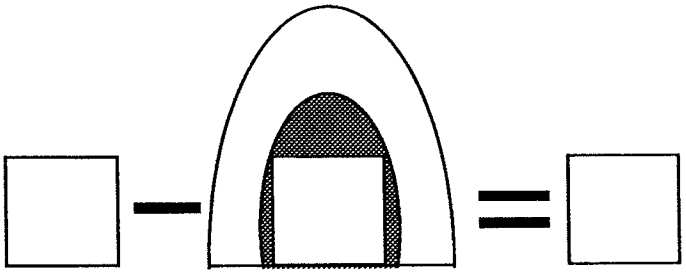




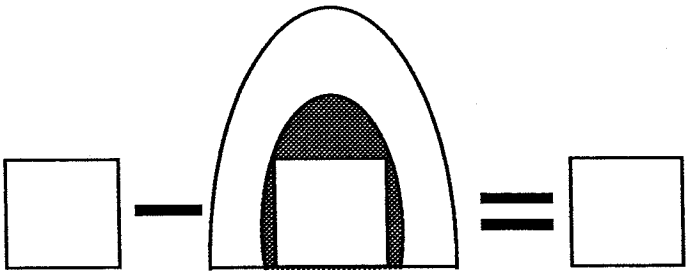


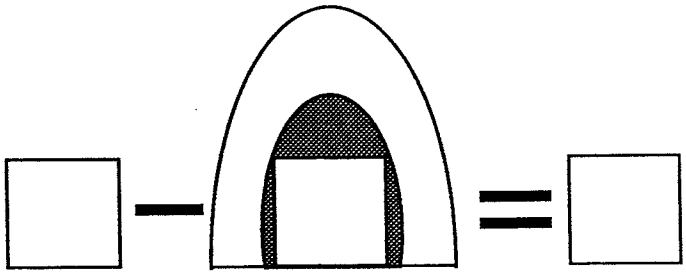


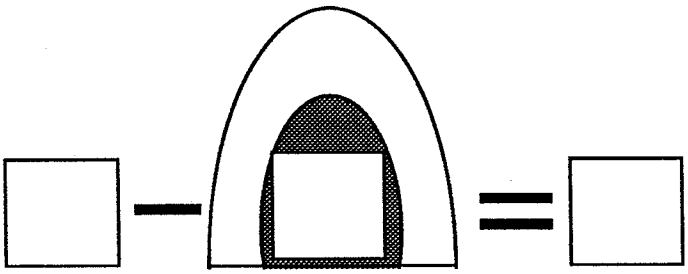


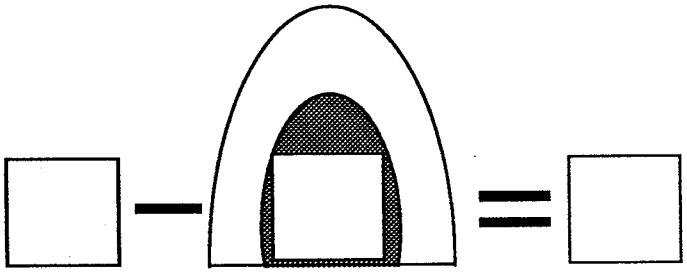


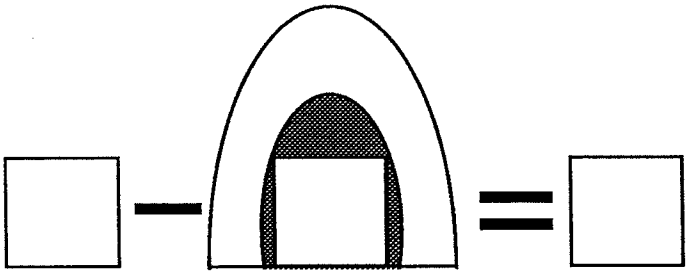
Mountain Subtraction

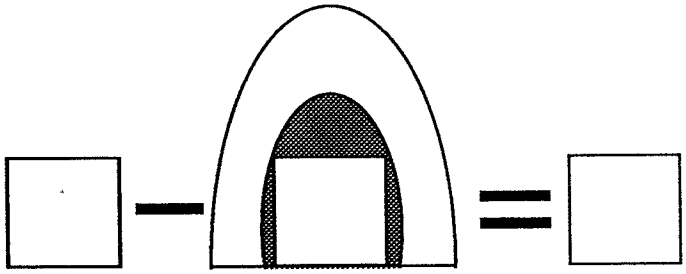


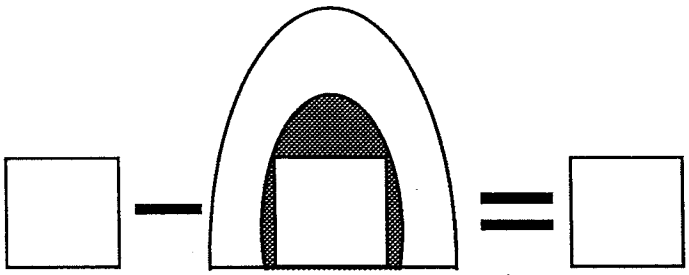


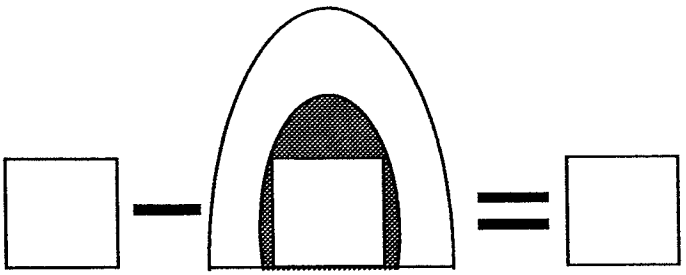




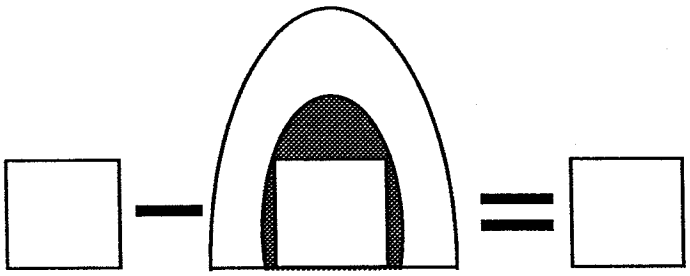


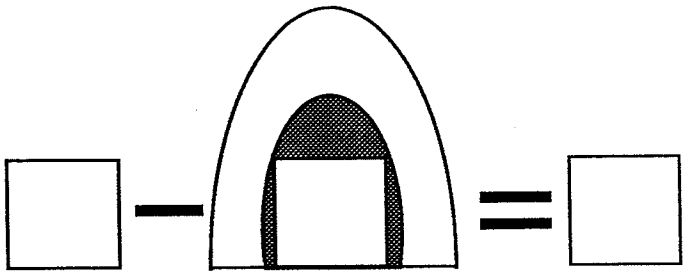


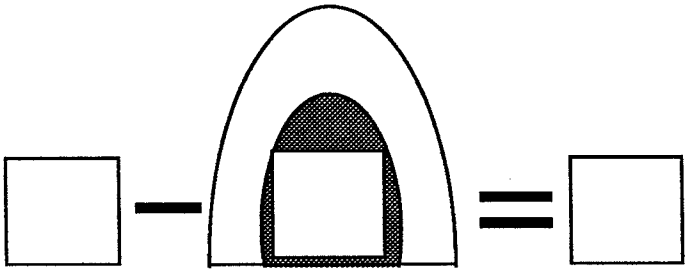


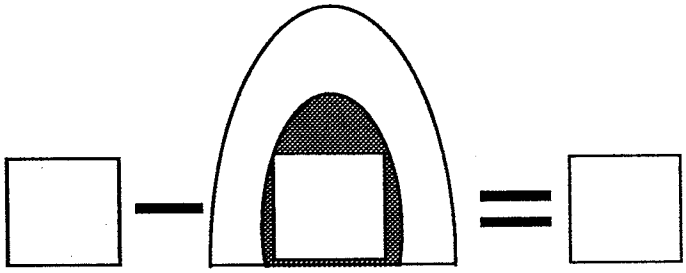


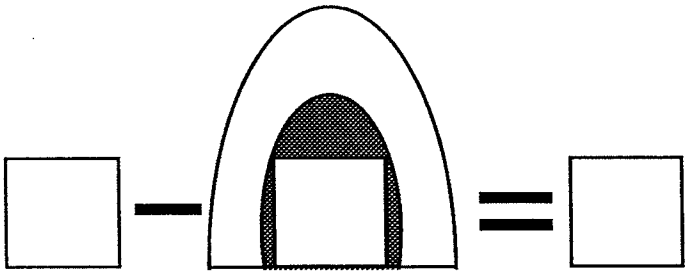
Mountain Subtraction

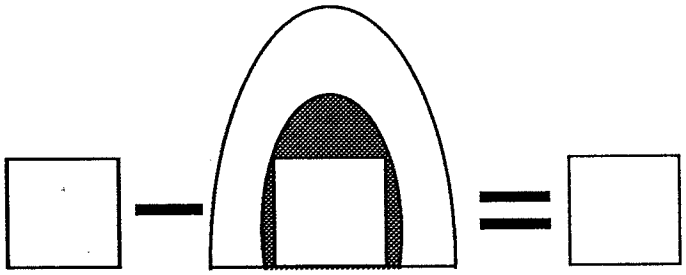


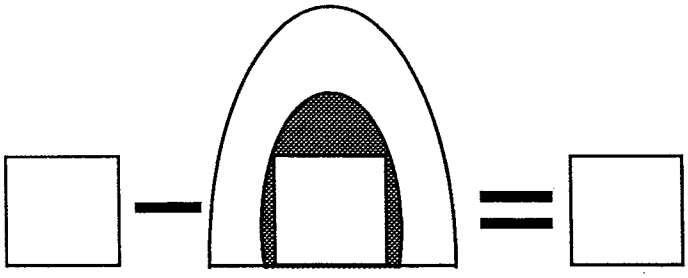


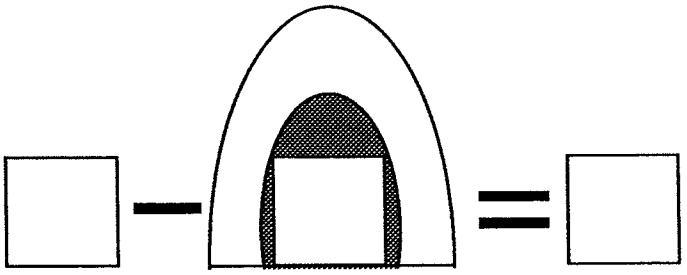




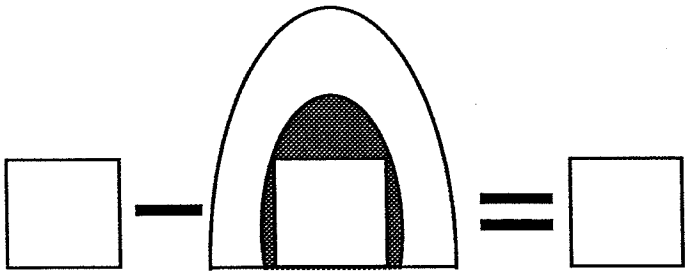


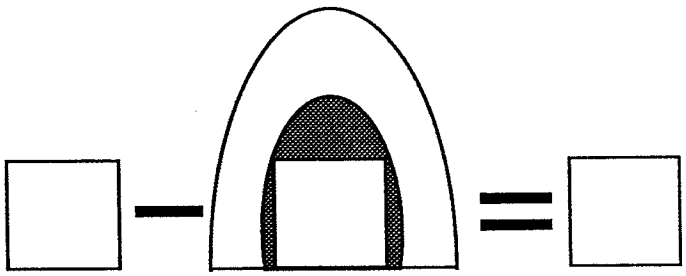


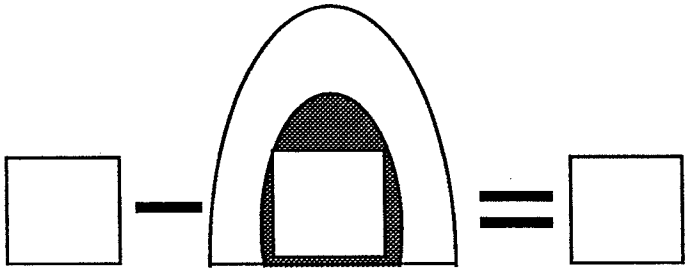


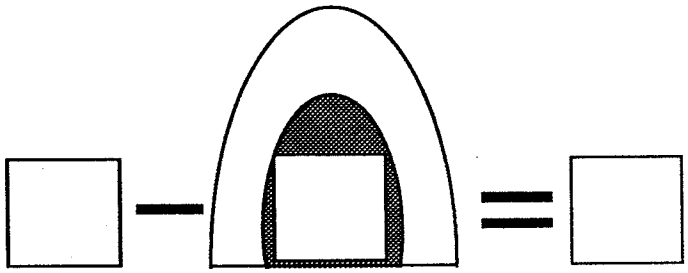


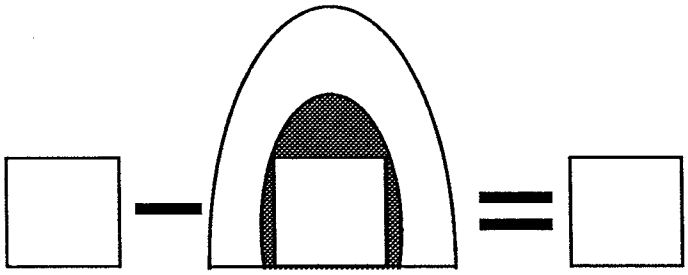
Mountain Subtraction

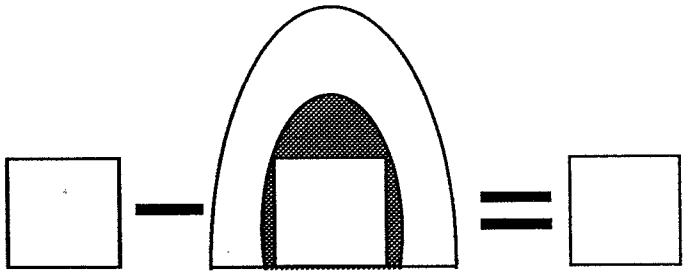


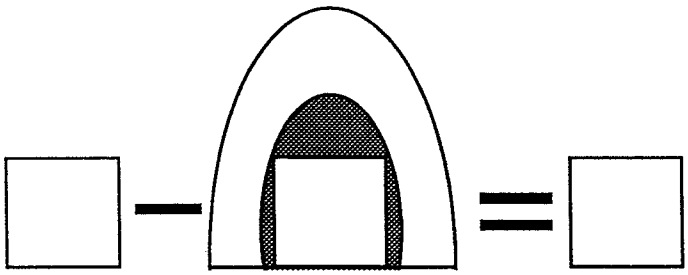


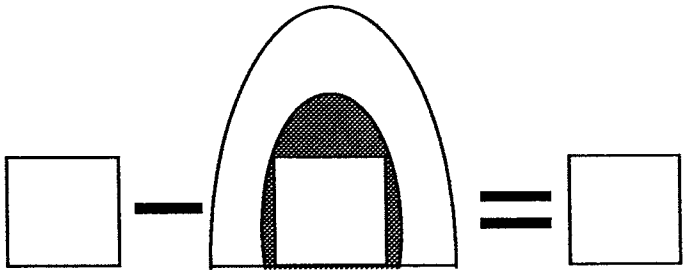




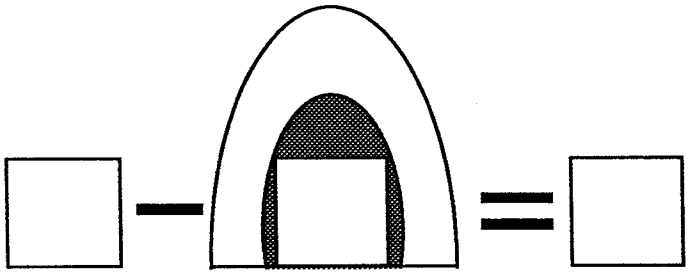


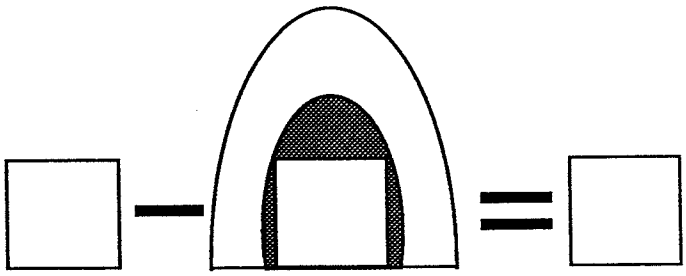


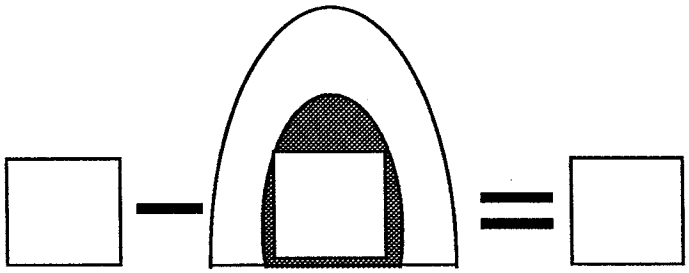


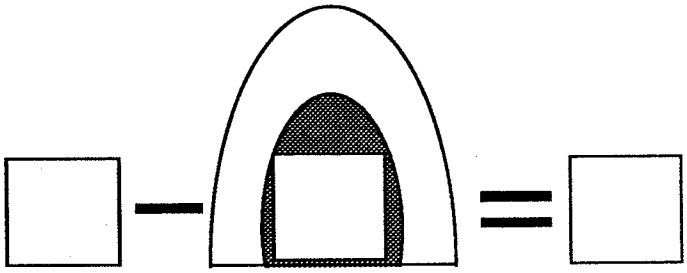


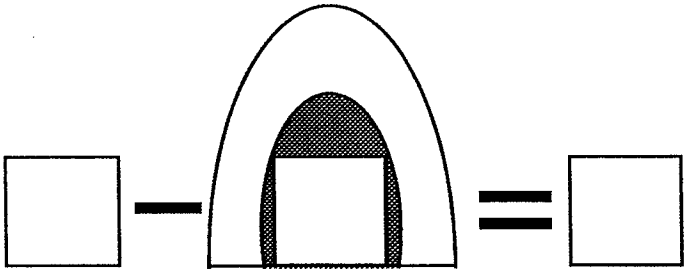
Mountain Subtraction

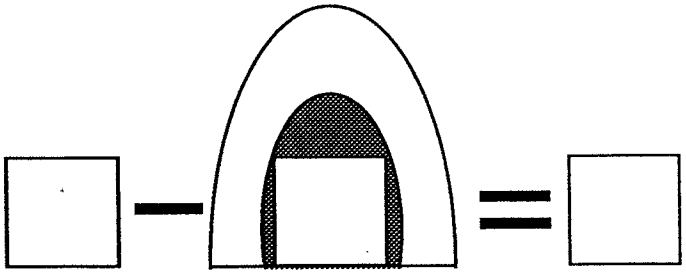


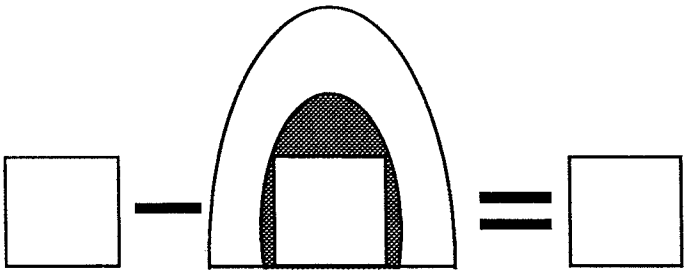


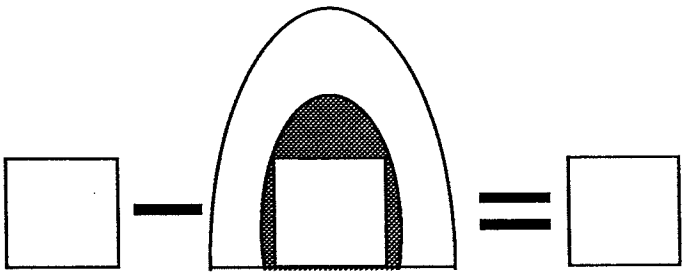




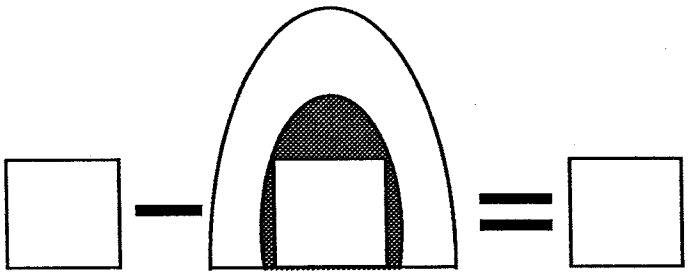


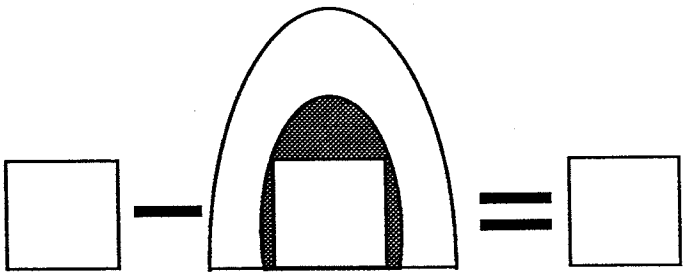


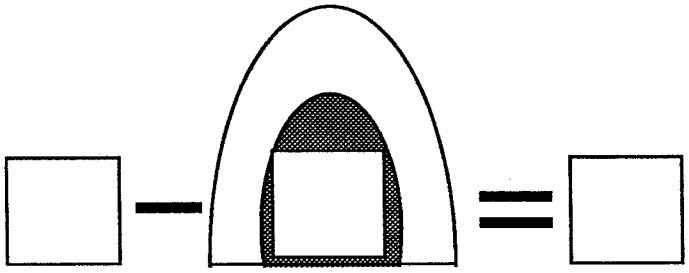


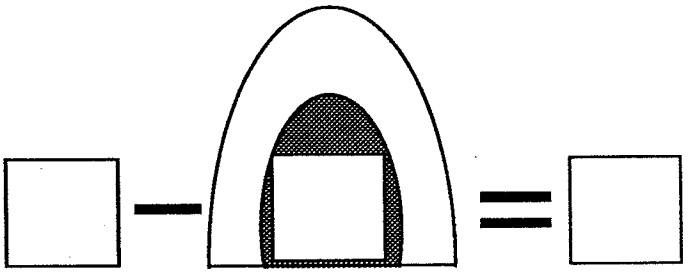


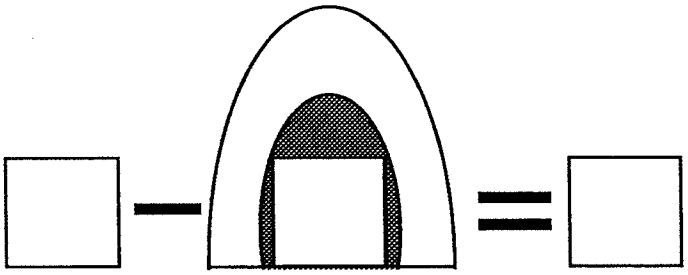
Mountain Subtraction

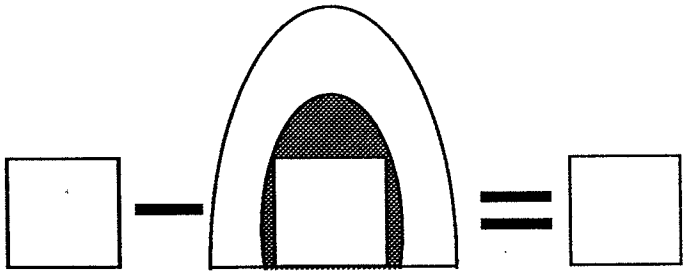


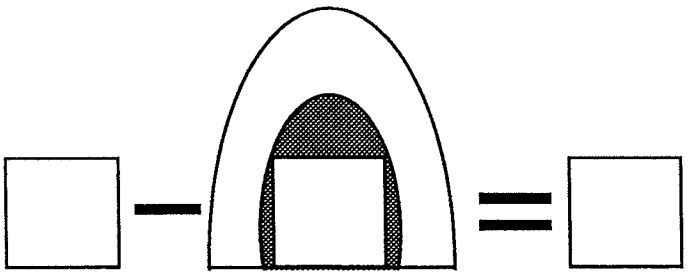


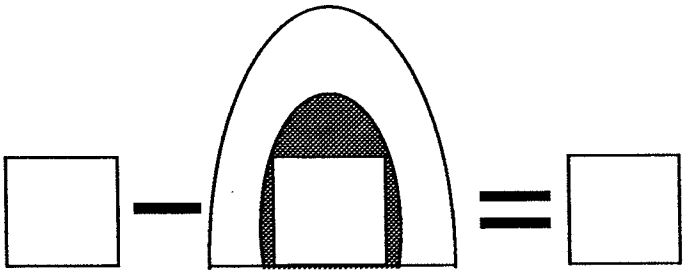


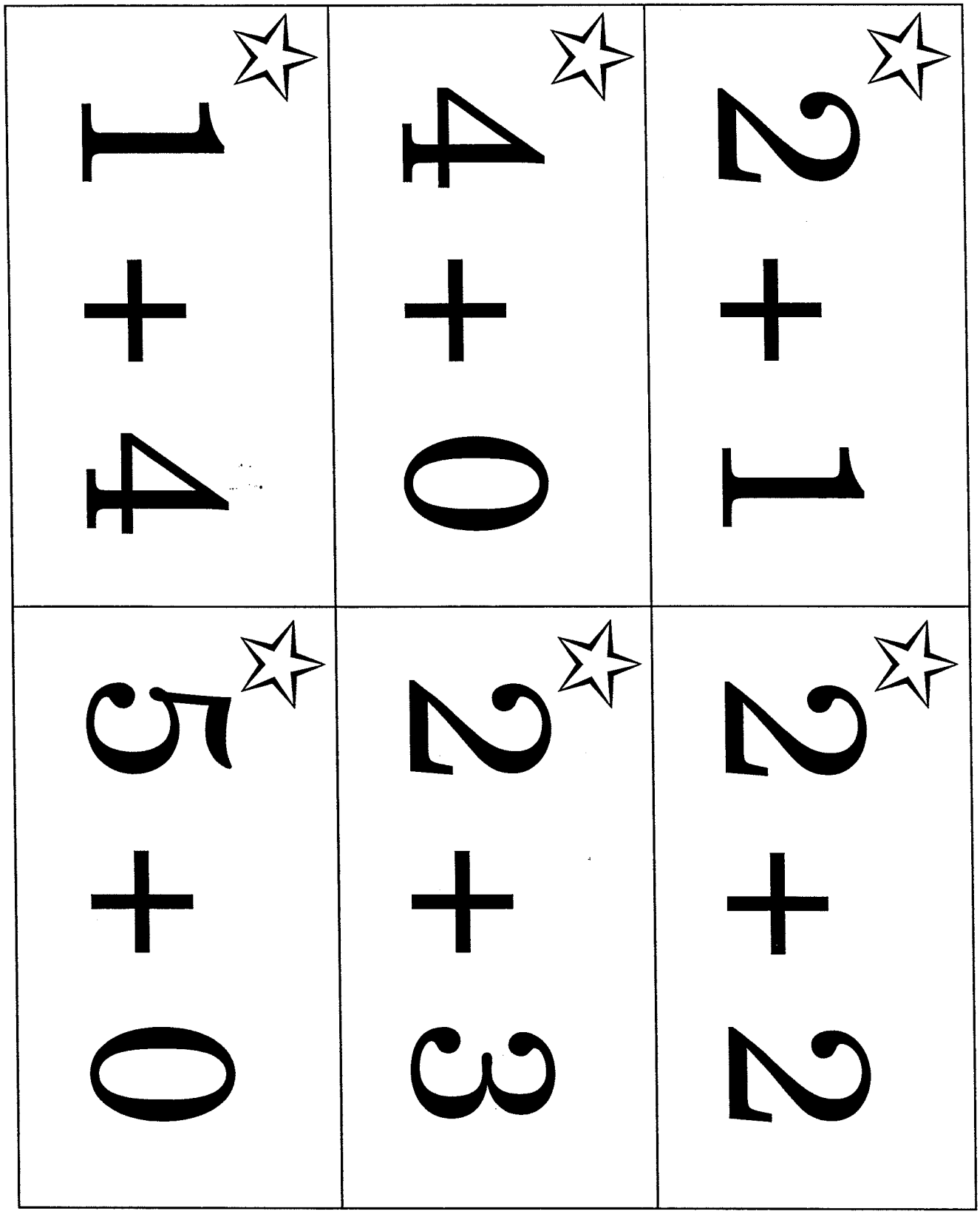




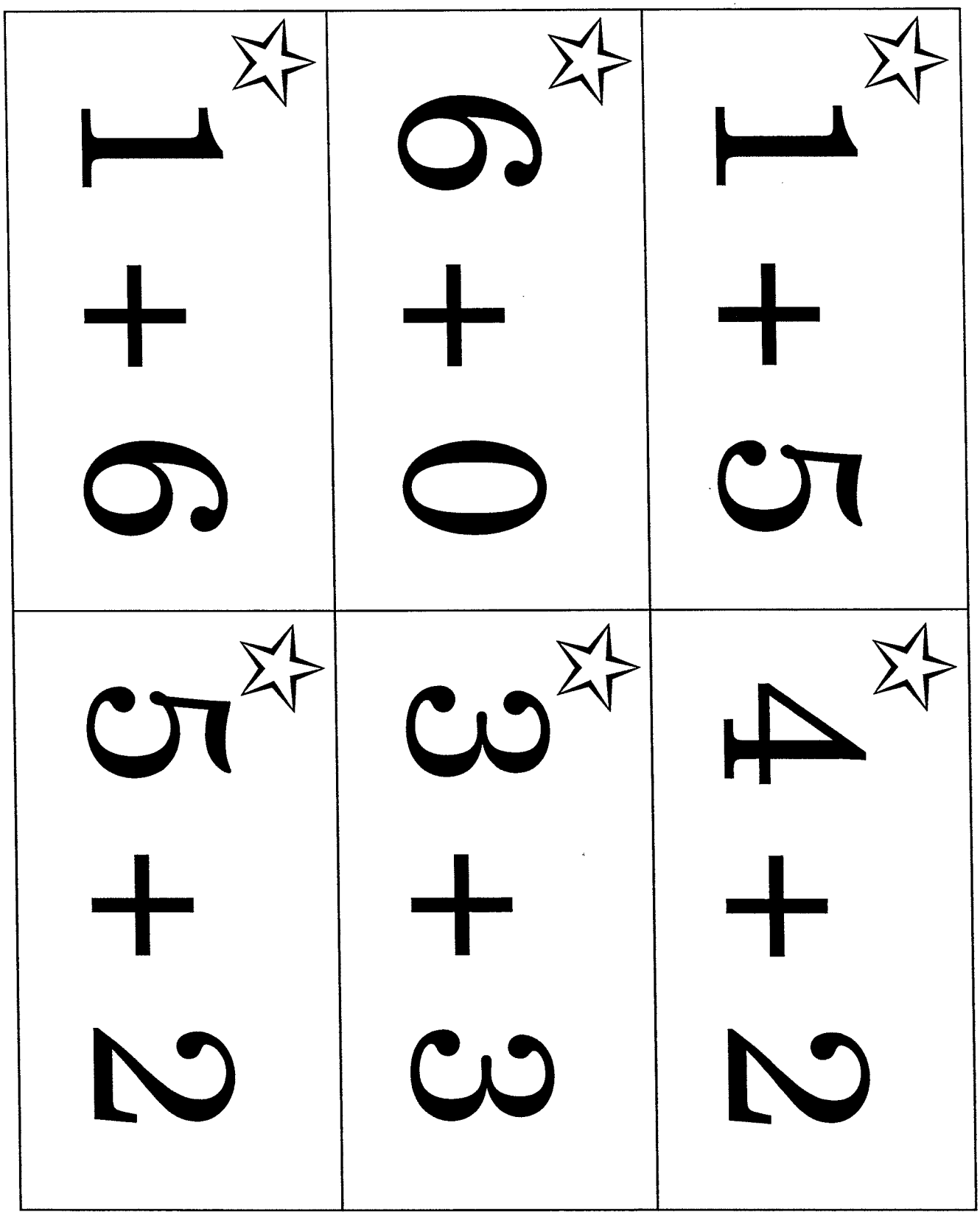




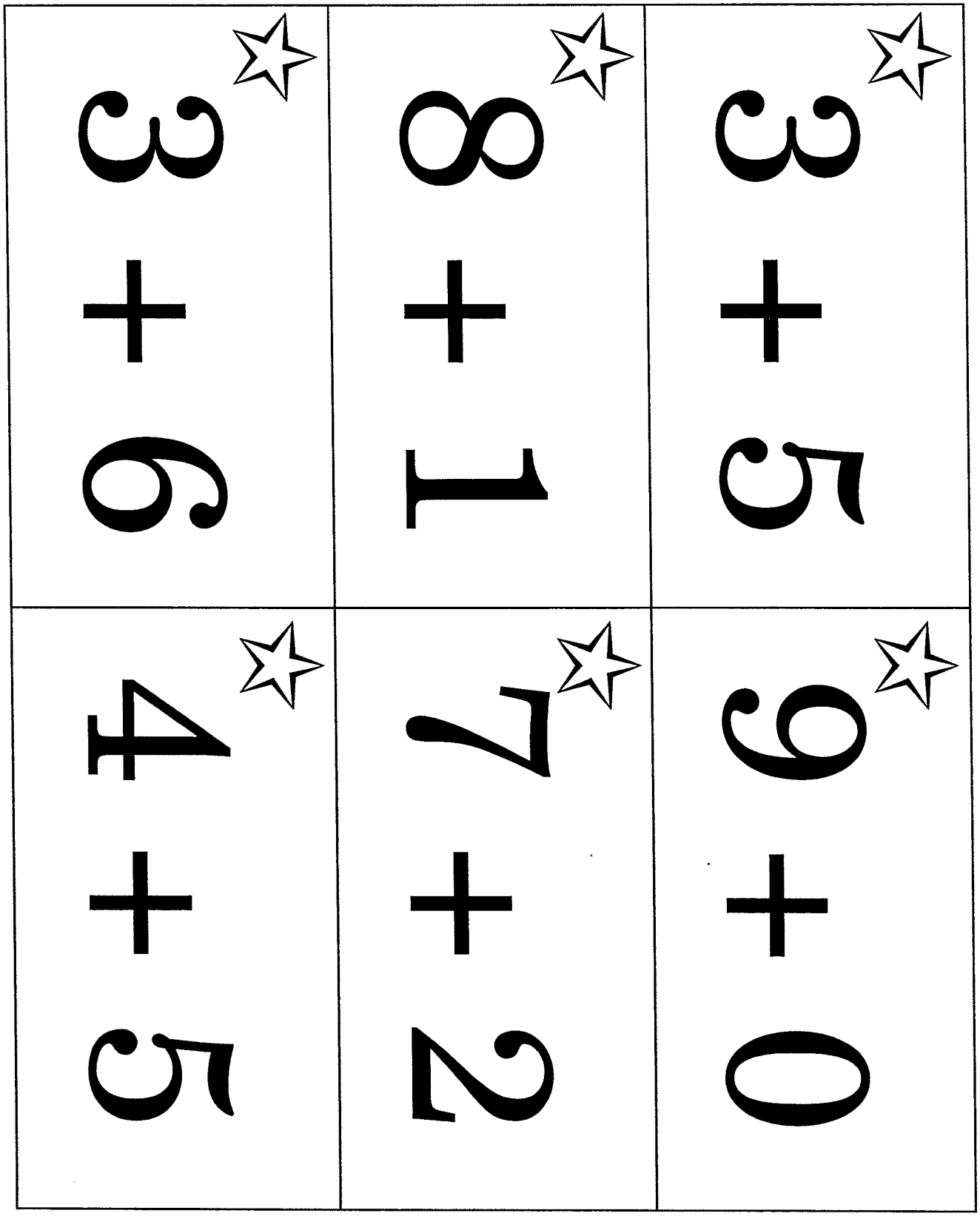



2 + 1
4 + 0
1 + 4
2 + 2
3 + 2
5 + 0

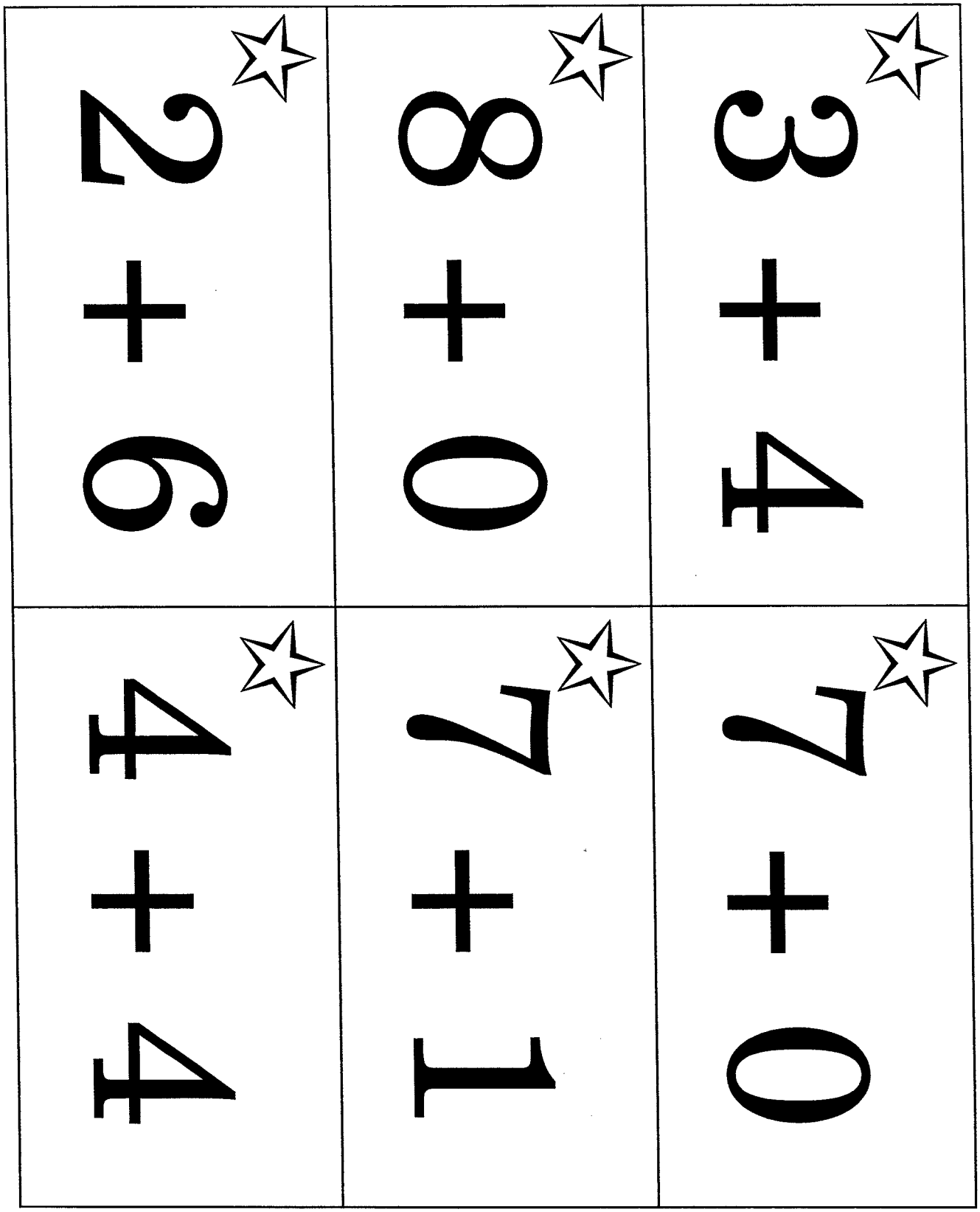
Add, Tell, Spin & Win



Add, Tell, Spin & Win (Challenging)



Add, Tell, Spin & Win (Challenging)



Subtract, Tell, Spin & Win

$\begin{array}{r} 5 \\ -3 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ -2 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ -1 \\ \hline \end{array}$
$\begin{array}{r} 5 \\ -0 \\ \hline \end{array}$	$\begin{array}{r} 4 \\ -4 \\ \hline \end{array}$	$\begin{array}{r} 4 \\ -3 \\ \hline \end{array}$
$\begin{array}{r} 4 \\ -2 \\ \hline \end{array}$	$\begin{array}{r} 4 \\ -1 \\ \hline \end{array}$	$\begin{array}{r} 4 \\ -0 \\ \hline \end{array}$

Subtract, Tell, Spin & Win

$\begin{array}{r} 6 \\ -6 \\ \hline \end{array}$	$\begin{array}{r} 6 \\ -5 \\ \hline \end{array}$	$\begin{array}{r} 6 \\ -4 \\ \hline \end{array}$
$\begin{array}{r} 6 \\ -3 \\ \hline \end{array}$	$\begin{array}{r} 6 \\ -2 \\ \hline \end{array}$	$\begin{array}{r} 6 \\ -1 \\ \hline \end{array}$
$\begin{array}{r} 6 \\ -0 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ -5 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ -4 \\ \hline \end{array}$

Subtract, Tell, Spin & Win (Challenging)

$\begin{array}{r} 8 \\ -8 \\ \hline \end{array}$	$\begin{array}{r} 7 \\ -0 \\ \hline \end{array}$	$\begin{array}{r} 7 \\ -1 \\ \hline \end{array}$
$\begin{array}{r} 7 \\ -2 \\ \hline \end{array}$	$\begin{array}{r} 7 \\ -3 \\ \hline \end{array}$	$\begin{array}{r} 7 \\ -4 \\ \hline \end{array}$
$\begin{array}{r} 7 \\ -5 \\ \hline \end{array}$	$\begin{array}{r} 7 \\ -6 \\ \hline \end{array}$	$\begin{array}{r} 7 \\ -7 \\ \hline \end{array}$

Subtract, Tell, Spin & Win (Challenging)

$\begin{array}{r} 9 \\ -0 \\ \hline \end{array}$	$\begin{array}{r} 8 \\ -0 \\ \hline \end{array}$	$\begin{array}{r} 8 \\ -1 \\ \hline \end{array}$
$\begin{array}{r} 8 \\ -2 \\ \hline \end{array}$	$\begin{array}{r} 8 \\ -3 \\ \hline \end{array}$	$\begin{array}{r} 8 \\ -4 \\ \hline \end{array}$
$\begin{array}{r} 8 \\ -5 \\ \hline \end{array}$	$\begin{array}{r} 8 \\ -6 \\ \hline \end{array}$	$\begin{array}{r} 8 \\ -7 \\ \hline \end{array}$

Subtract, Tell, Spin & Win (Challenging)

$\begin{array}{r} 9 \\ -9 \\ \hline \end{array}$	$\begin{array}{r} 9 \\ -1 \\ \hline \end{array}$	$\begin{array}{r} 9 \\ -2 \\ \hline \end{array}$
$\begin{array}{r} 9 \\ -3 \\ \hline \end{array}$	$\begin{array}{r} 9 \\ -4 \\ \hline \end{array}$	$\begin{array}{r} 9 \\ -5 \\ \hline \end{array}$
$\begin{array}{r} 9 \\ -6 \\ \hline \end{array}$	$\begin{array}{r} 9 \\ -7 \\ \hline \end{array}$	$\begin{array}{r} 9 \\ -8 \\ \hline \end{array}$

Add & Think

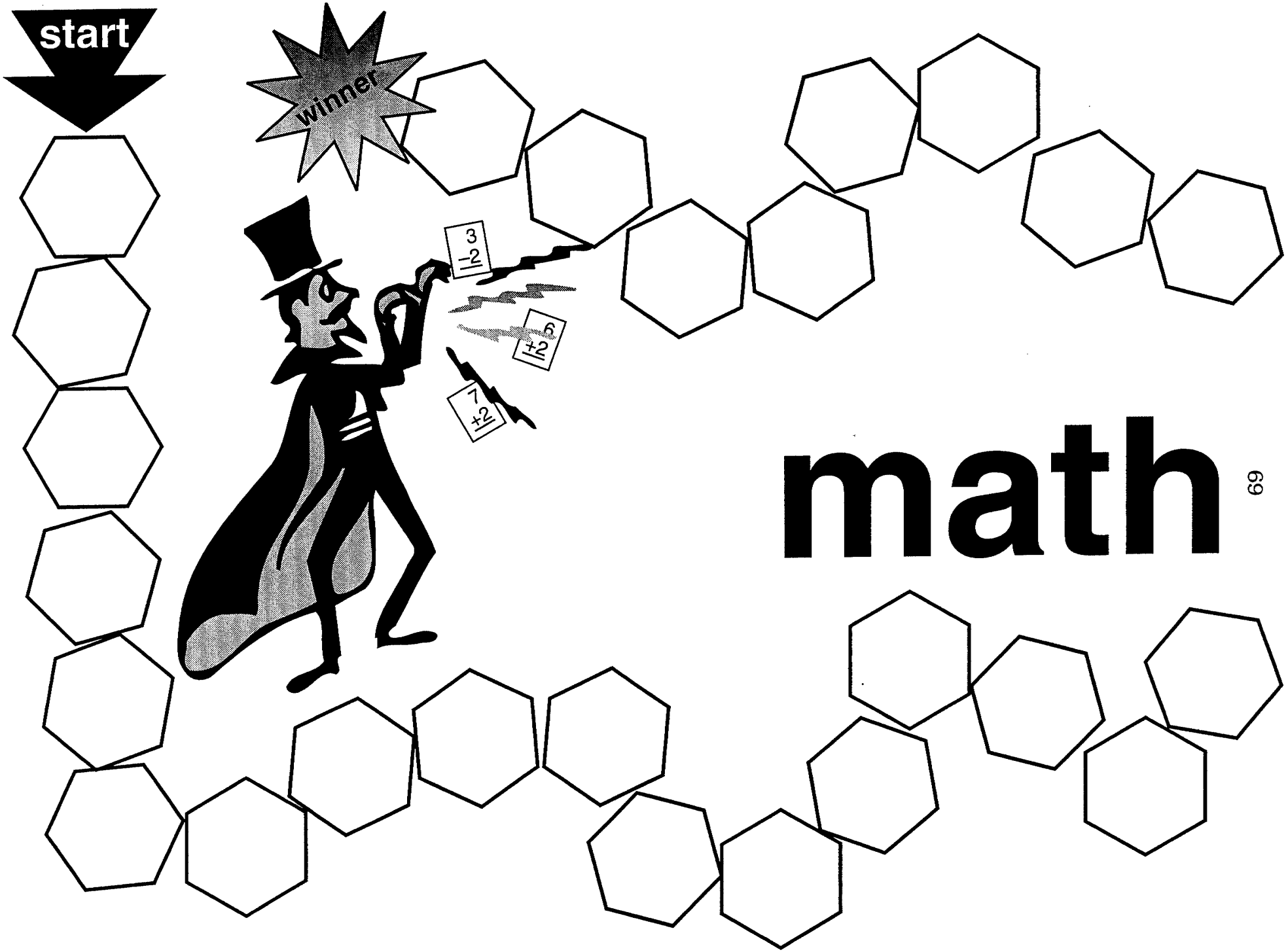
1	6	5	4
9	2	7	0
1	8	3	5
4	3	2	6

2	0	3	1
4	5	2	9
3	6	8	2
1	7	4	5

Add & Think

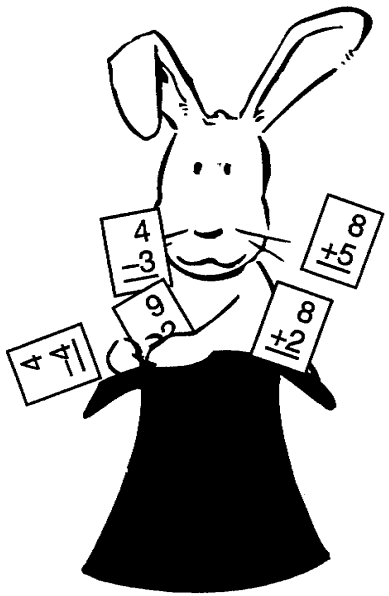
3	4	3	5
8	2	5	3
4	7	1	6
8	0	2	1

4	0	5	2
5	8	2	6
1	3	6	4
1	3	5	7



math

magic



Addition Lotto

1 + 4	4 + 0	1 + 3
5 + 0	3 + 2	2 + 2

Addition Lotto

6 + 1	3 + 3	1 + 5
2 + 5	0 + 6	2 + 4

Addition Lotto

2 + 6	8 + 0	4 + 3
3 + 5	7 + 1	7 + 0

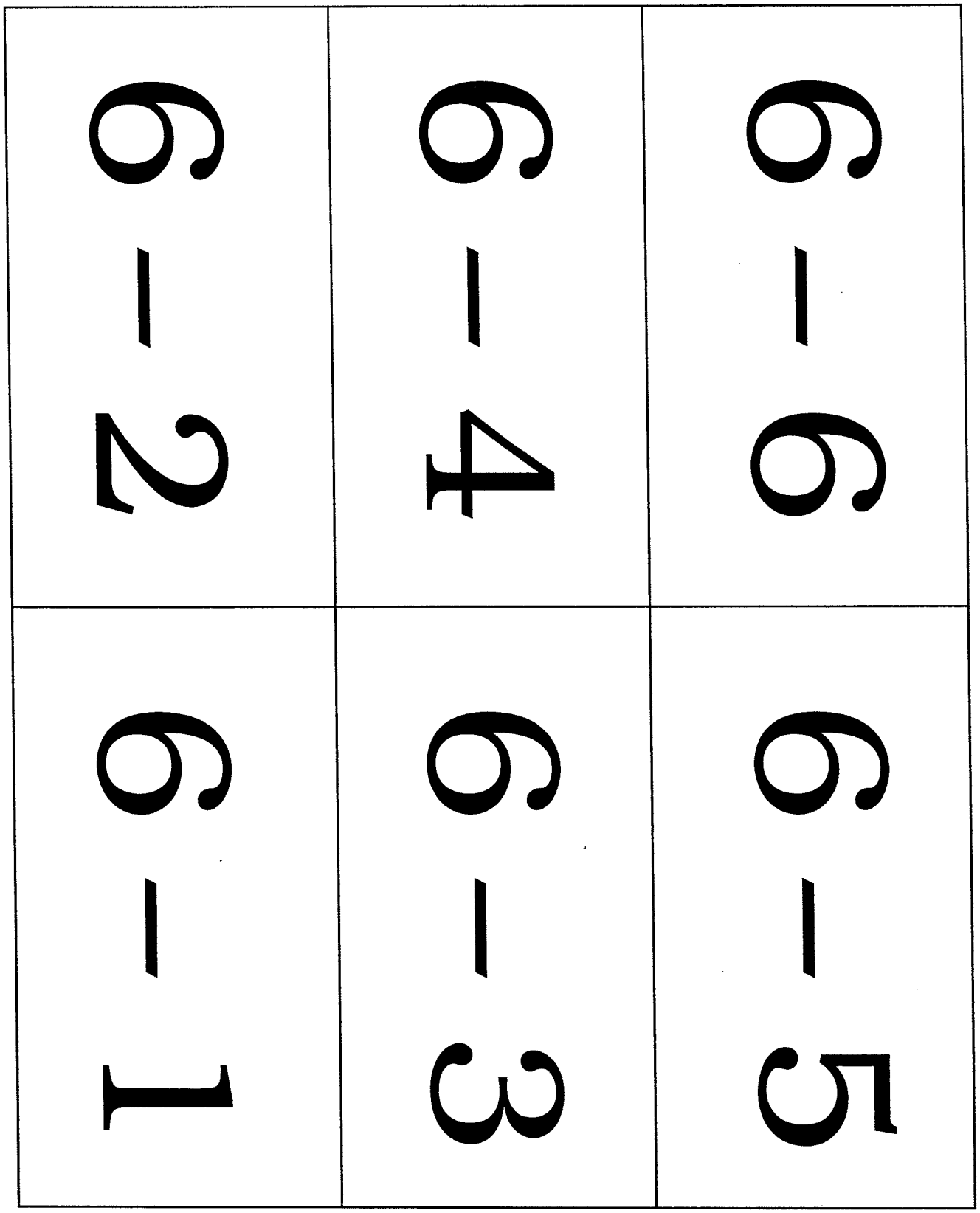
Addition Lotto

4 + 4	8 + 1	6 + 3
9 + 0	7 + 2	5 + 4

Addition Lotto

10 + 0	2 + 8	6 + 4
9 + 1	7 + 3	5 + 5

Subtraction Lotto



Subtraction Lotto

5 − 2	5 − 4	5 − 0
5 − 1	5 − 3	5 − 5

Subtraction Lotto

4 − 1	4 − 3	5 − 0
4 − 0	4 − 2	4 − 4

Subtraction Top Draw

$\begin{array}{r} 5 \\ -3 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ -2 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ -1 \\ \hline \end{array}$
$\begin{array}{r} 5 \\ -0 \\ \hline \end{array}$	$\begin{array}{r} 4 \\ -4 \\ \hline \end{array}$	$\begin{array}{r} 4 \\ -3 \\ \hline \end{array}$
$\begin{array}{r} 4 \\ -2 \\ \hline \end{array}$	$\begin{array}{r} 4 \\ -1 \\ \hline \end{array}$	$\begin{array}{r} 4 \\ -0 \\ \hline \end{array}$

Subtraction Top Draw

$\begin{array}{r} 6 \\ -6 \\ \hline \end{array}$	$\begin{array}{r} 6 \\ -5 \\ \hline \end{array}$	$\begin{array}{r} 6 \\ -4 \\ \hline \end{array}$
$\begin{array}{r} 6 \\ -3 \\ \hline \end{array}$	$\begin{array}{r} 6 \\ -2 \\ \hline \end{array}$	$\begin{array}{r} 6 \\ -1 \\ \hline \end{array}$
$\begin{array}{r} 6 \\ -0 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ -5 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ -4 \\ \hline \end{array}$

Subtraction Top Draw (Challenging)

$\begin{array}{r} 8 \\ -8 \\ \hline \end{array}$	$\begin{array}{r} 7 \\ -0 \\ \hline \end{array}$	$\begin{array}{r} 7 \\ -1 \\ \hline \end{array}$
$\begin{array}{r} 7 \\ -2 \\ \hline \end{array}$	$\begin{array}{r} 7 \\ -3 \\ \hline \end{array}$	$\begin{array}{r} 7 \\ -4 \\ \hline \end{array}$
$\begin{array}{r} 7 \\ -5 \\ \hline \end{array}$	$\begin{array}{r} 7 \\ -6 \\ \hline \end{array}$	$\begin{array}{r} 7 \\ -7 \\ \hline \end{array}$

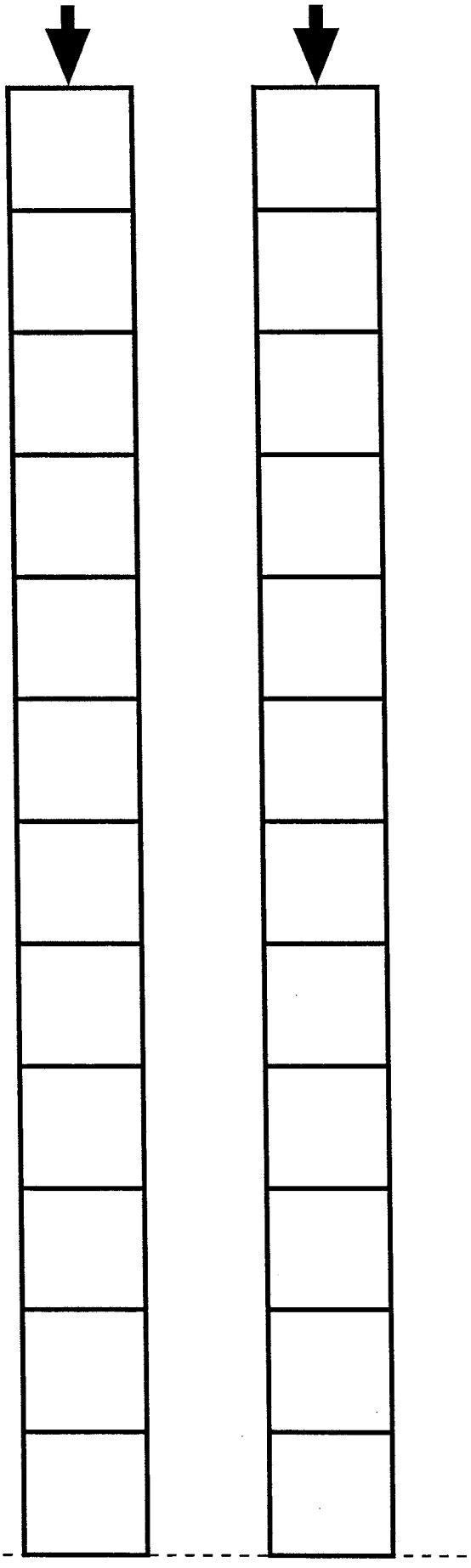
Subtraction Top Draw (Challenging)

$\begin{array}{r} 9 \\ -0 \\ \hline \end{array}$	$\begin{array}{r} 8 \\ -0 \\ \hline \end{array}$	$\begin{array}{r} 8 \\ -1 \\ \hline \end{array}$
$\begin{array}{r} 8 \\ -2 \\ \hline \end{array}$	$\begin{array}{r} 8 \\ -3 \\ \hline \end{array}$	$\begin{array}{r} 8 \\ -4 \\ \hline \end{array}$
$\begin{array}{r} 8 \\ -5 \\ \hline \end{array}$	$\begin{array}{r} 8 \\ -6 \\ \hline \end{array}$	$\begin{array}{r} 8 \\ -7 \\ \hline \end{array}$

Subtraction Top Draw (Challenging)

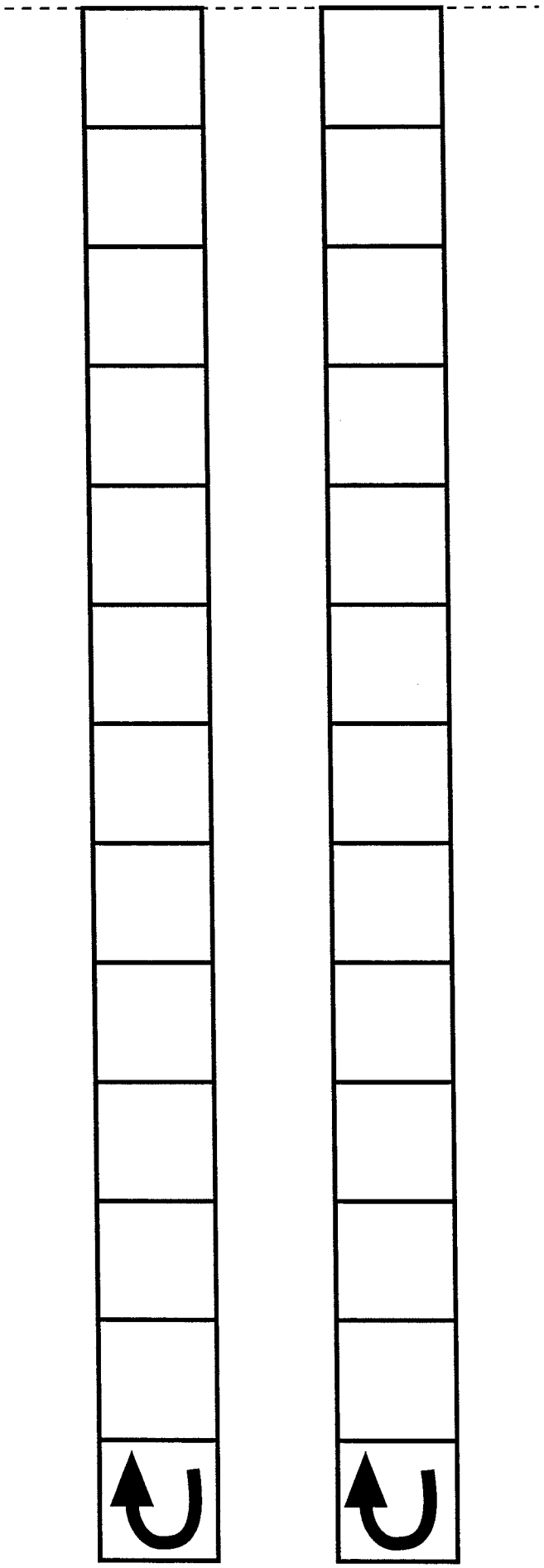
$\begin{array}{r} 9 \\ -9 \\ \hline \end{array}$	$\begin{array}{r} 9 \\ -1 \\ \hline \end{array}$	$\begin{array}{r} 9 \\ -2 \\ \hline \end{array}$
$\begin{array}{r} 9 \\ -3 \\ \hline \end{array}$	$\begin{array}{r} 9 \\ -4 \\ \hline \end{array}$	$\begin{array}{r} 9 \\ -5 \\ \hline \end{array}$
$\begin{array}{r} 9 \\ -6 \\ \hline \end{array}$	$\begin{array}{r} 9 \\ -7 \\ \hline \end{array}$	$\begin{array}{r} 9 \\ -8 \\ \hline \end{array}$

Go For It

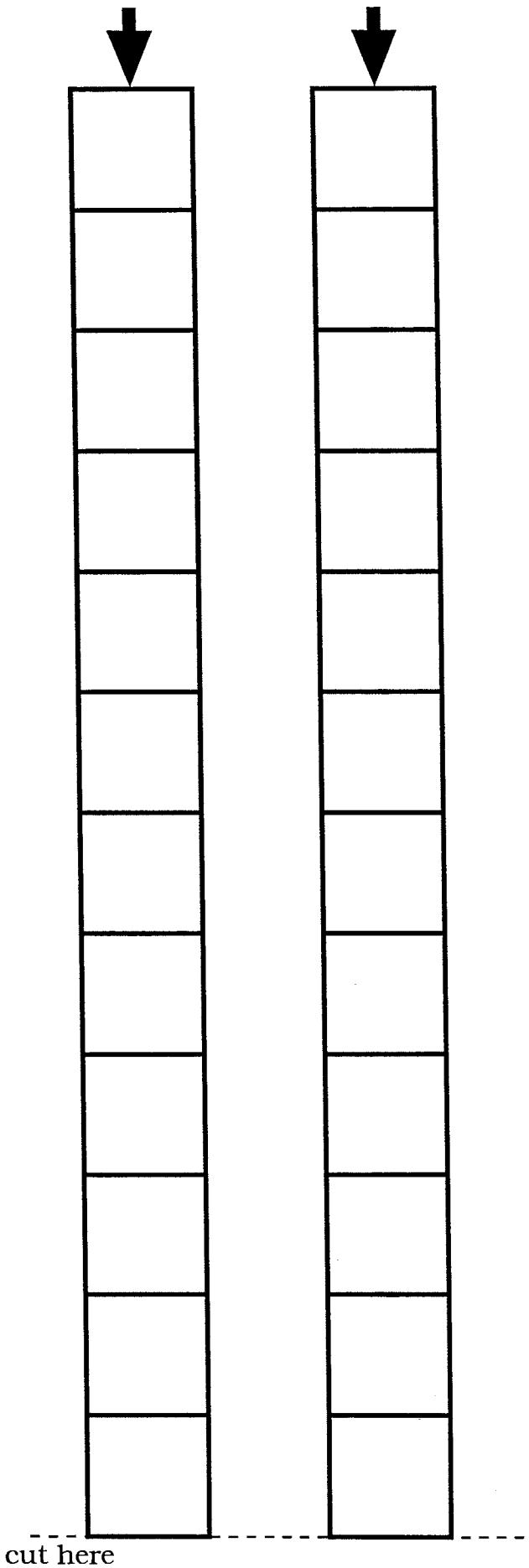


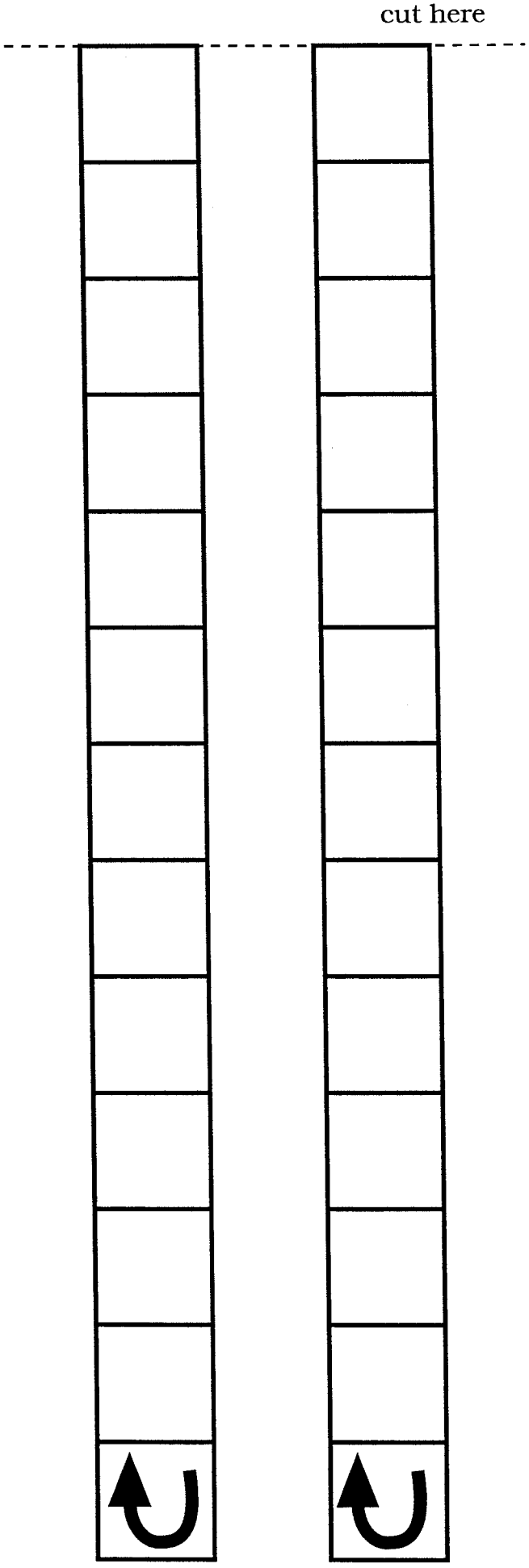
cut here

cut here



Go For It





Number Muncher Cards

	$\begin{array}{r} 1 \\ +1 \\ \hline \end{array}$	$\begin{array}{r} 1 \\ +2 \\ \hline \end{array}$
$\begin{array}{r} 2 \\ +2 \\ \hline \end{array}$	$\begin{array}{r} 2 \\ +3 \\ \hline \end{array}$	$\begin{array}{r} 3 \\ +3 \\ \hline \end{array}$
$\begin{array}{r} 3 \\ +4 \\ \hline \end{array}$	$\begin{array}{r} 4 \\ +4 \\ \hline \end{array}$	$\begin{array}{r} 4 \\ +5 \\ \hline \end{array}$

Number Muncher Cards

$\begin{array}{r} 5 \\ +5 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ +6 \\ \hline \end{array}$	$\begin{array}{r} 6 \\ +6 \\ \hline \end{array}$
$\begin{array}{r} 6 \\ +7 \\ \hline \end{array}$	$\begin{array}{r} 7 \\ +7 \\ \hline \end{array}$	$\begin{array}{r} 7 \\ +8 \\ \hline \end{array}$
$\begin{array}{r} 8 \\ +8 \\ \hline \end{array}$	$\begin{array}{r} 8 \\ +9 \\ \hline \end{array}$	$\begin{array}{r} 9 \\ +9 \\ \hline \end{array}$

Number Muncher Cards

	2	3
4	5	6
7	8	9

Number Muncher Cards

10	11	12
13	14	15
16	17	18

8
16
6
14
6
8
4
14
4
6
18
10
10
2
2
2
12
16
6
10
18
4
2
8
14
12
16
start
Doublesland

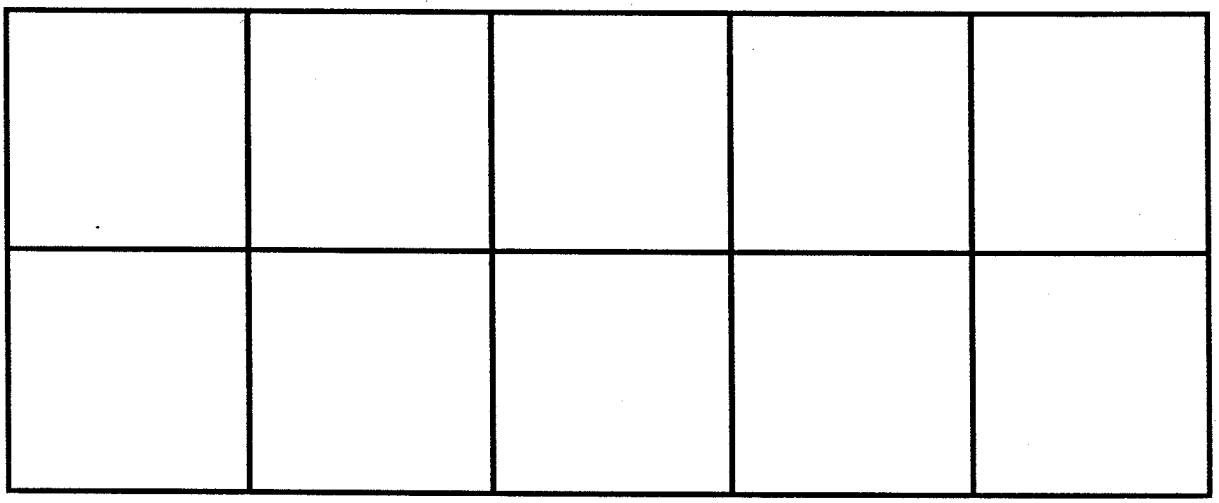
12
6
10
10
2
4
2
4
6

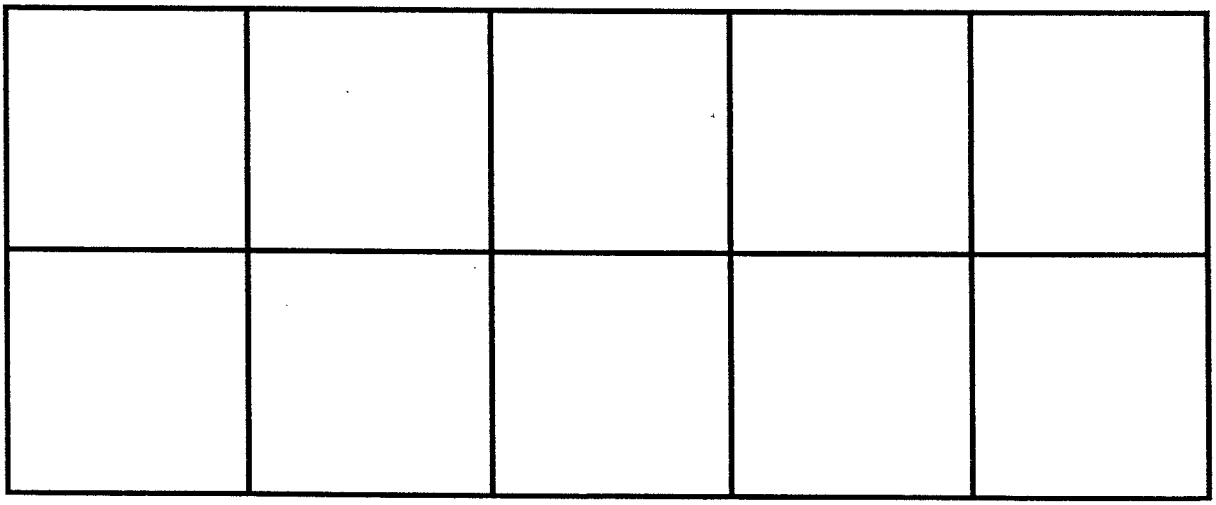
14
12
8
6
8
14
14
18
12

cards

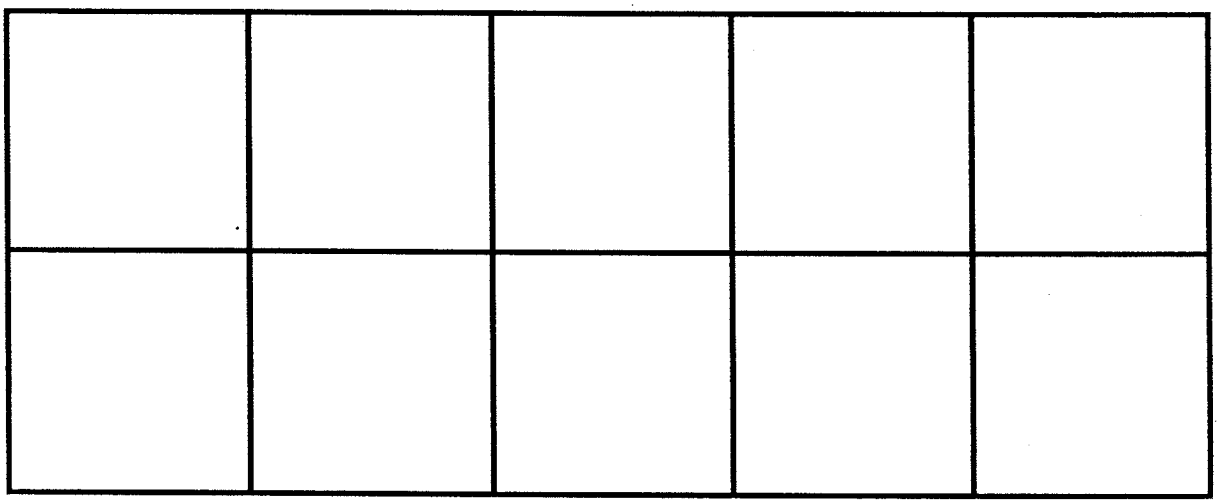
2 + 2	3 + 3	4 + 4	1 + 1	4 + 4	7 + 7
5 + 5	6 + 6	7 + 7	2 + 2	5 + 5	8 + 8
8 + 8	9 + 9	1 + 1	3 + 3	6 + 6	9 + 9

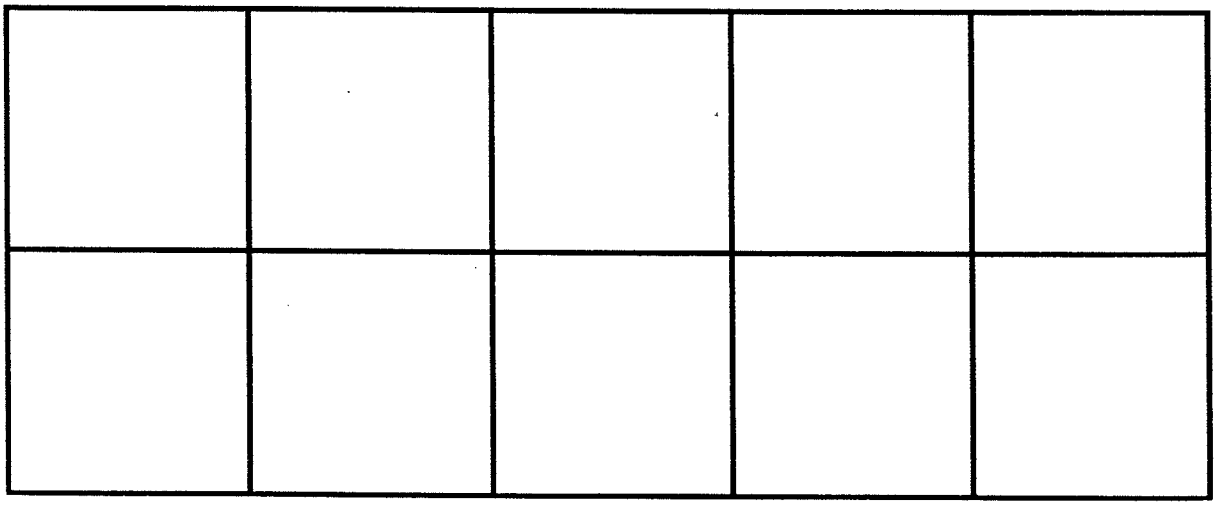
Ten Frame Board—Fast Tens





Ten Frame Board—Fast Tens





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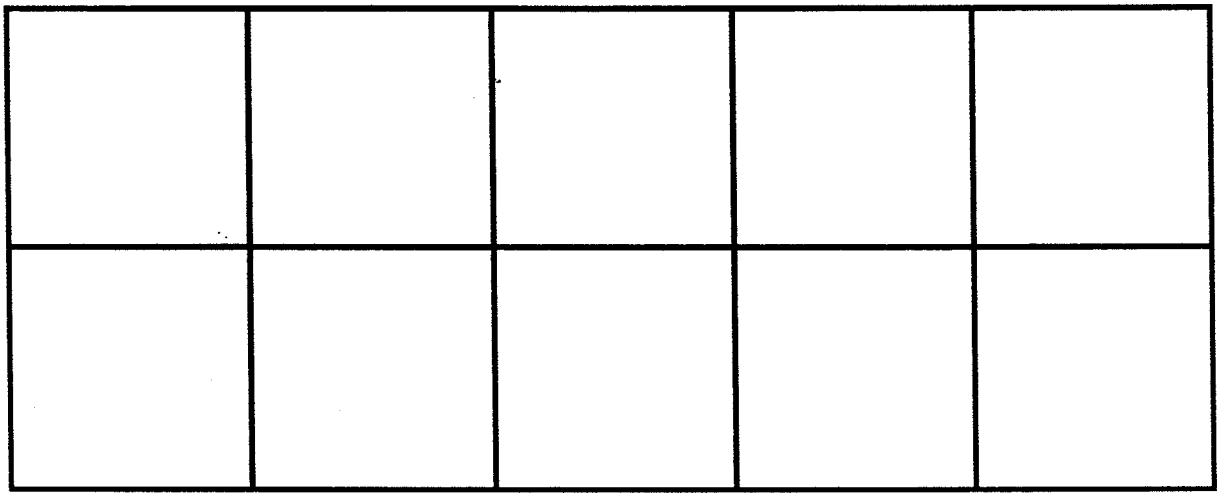

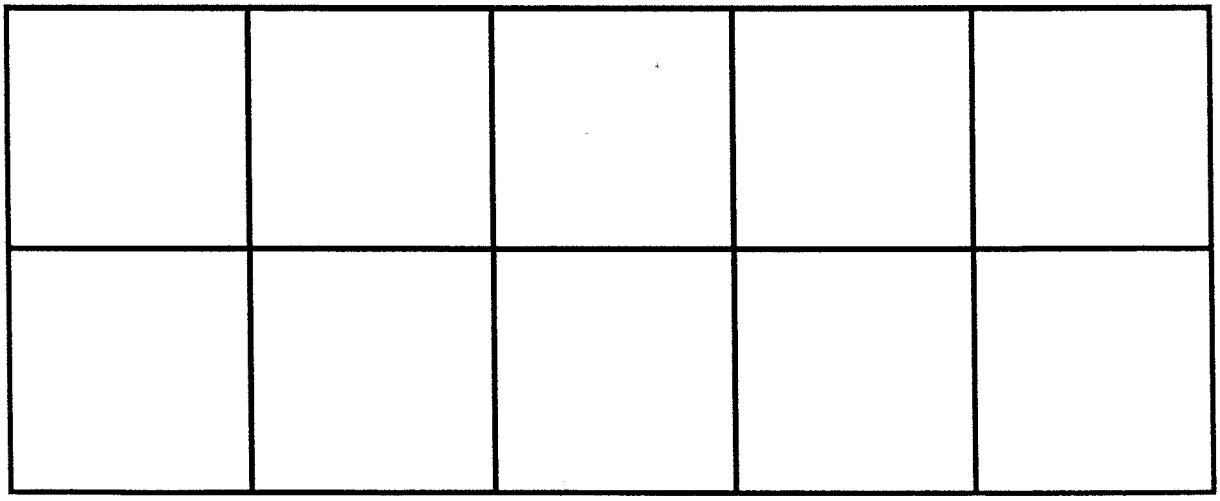

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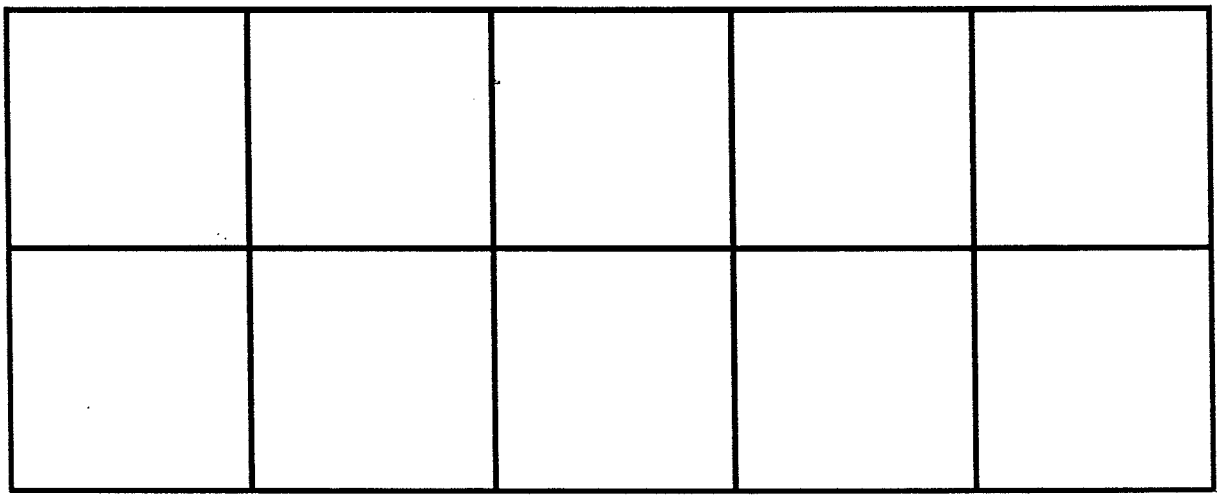
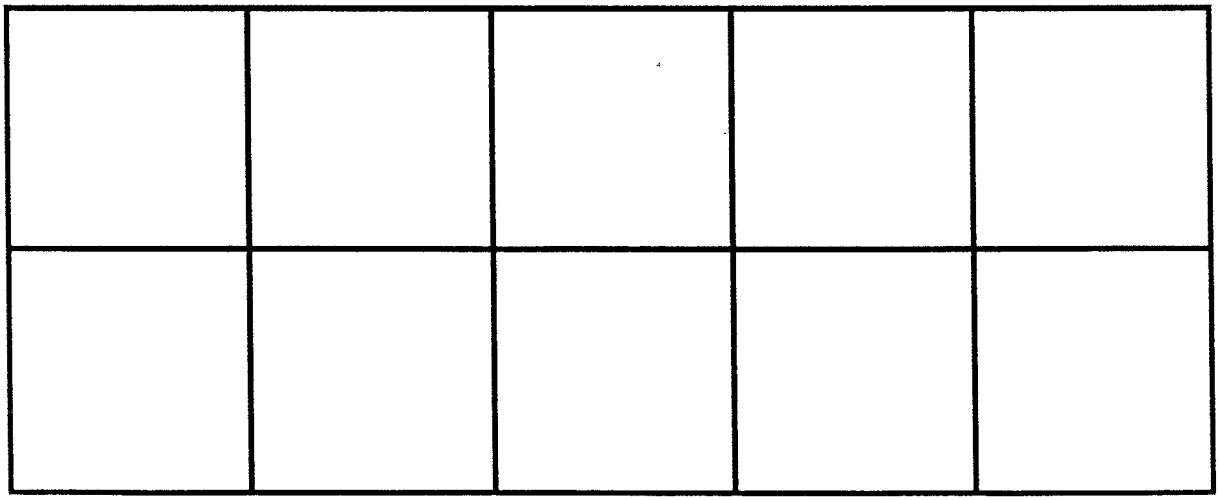


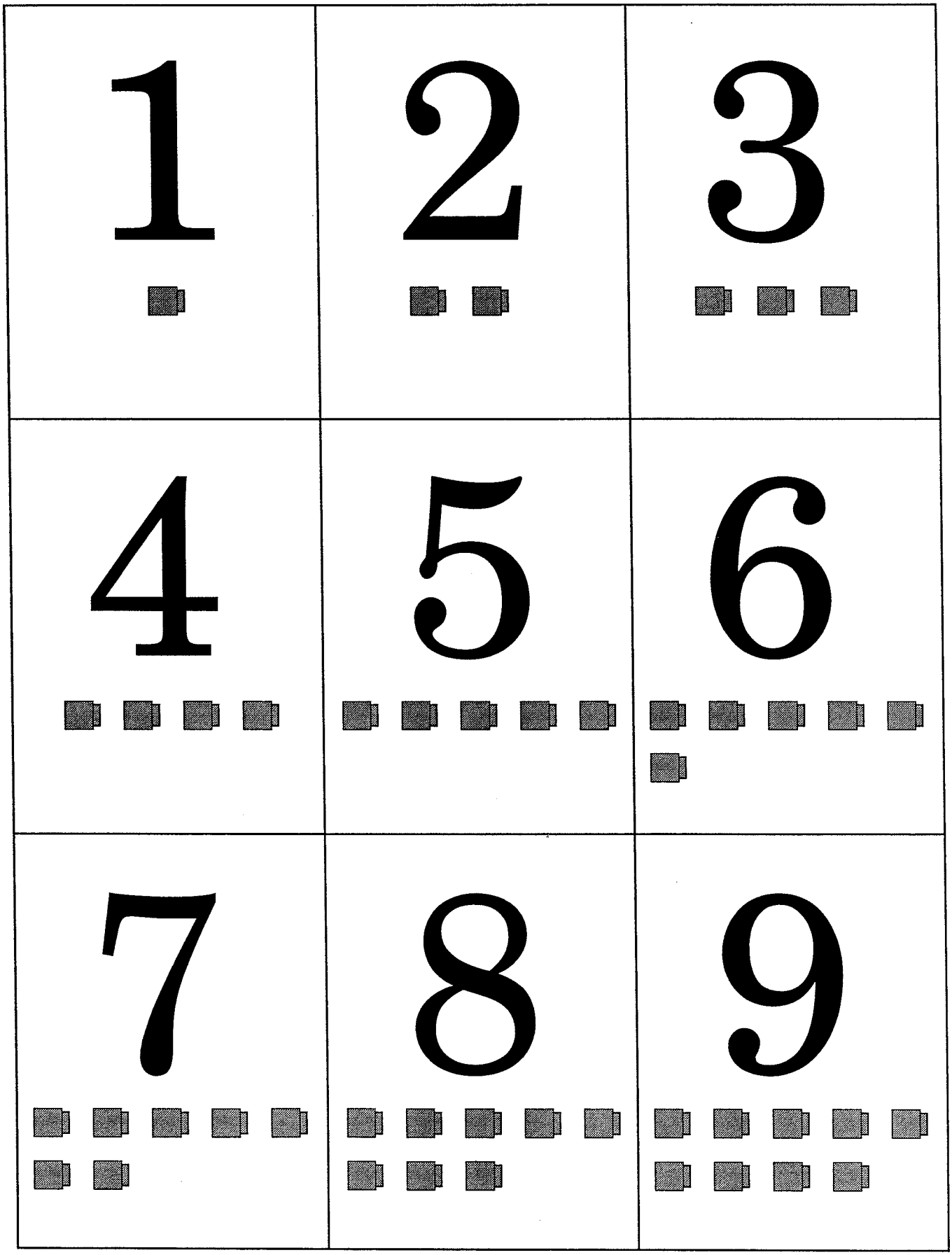


Add & Think (Facts to 18)

0	3	3	6
2	1	5	4
8	6	7	3
4	5	2	2

1	7	8	3
4	2	0	1
4	6	3	6
9	10	2	5

21 Cards



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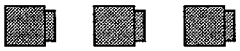
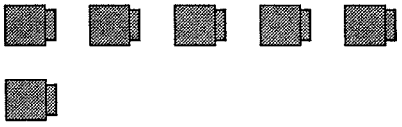
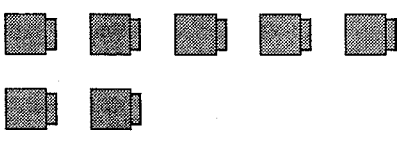
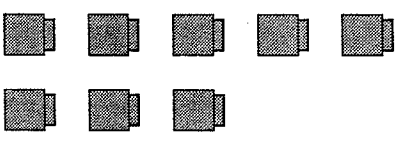
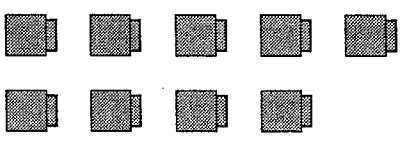
1 	2 	3 
4 	5 	6 
7 	8 	9 

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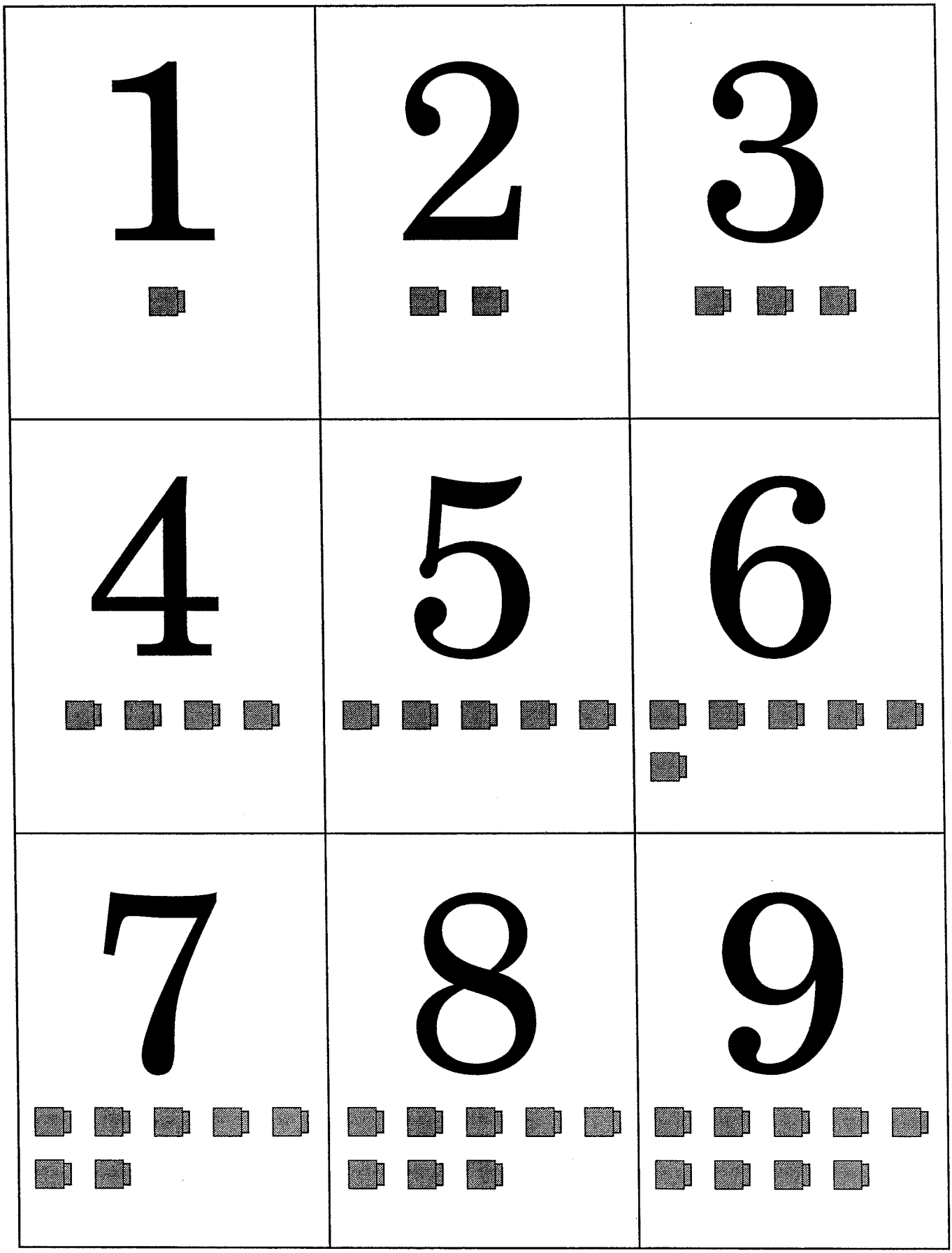

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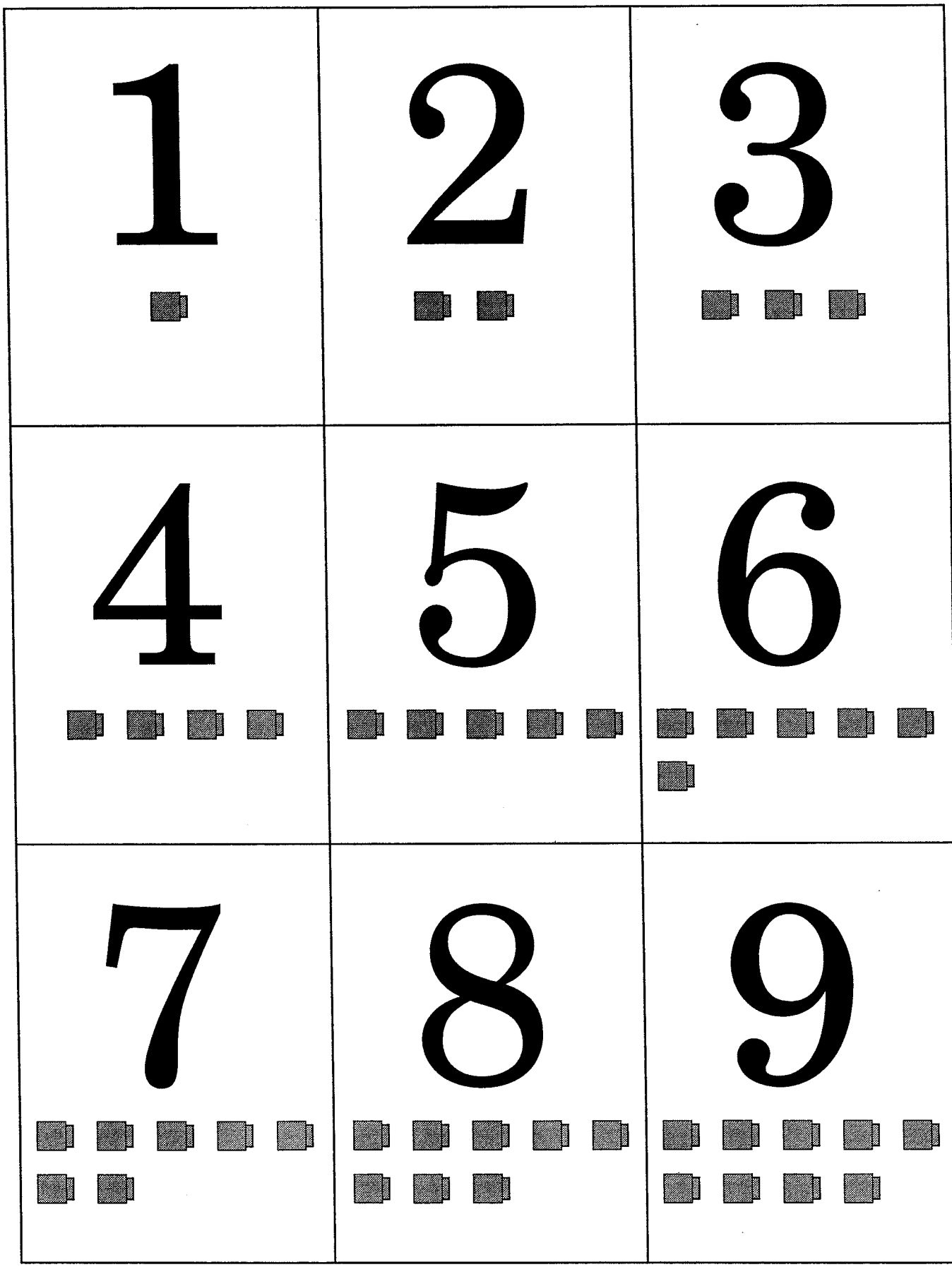

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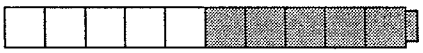
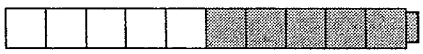
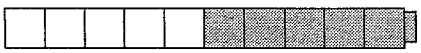
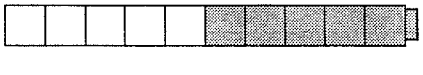
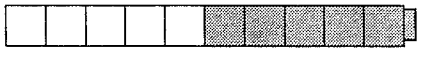
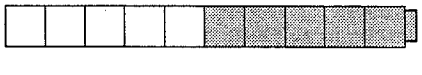
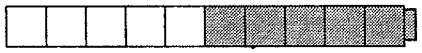
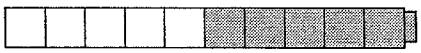
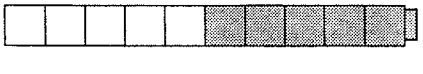
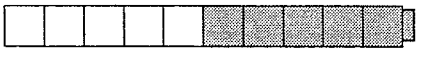
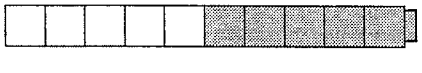
10 	10 	10 
10 	10 	10 
10 	10 	10 

21 Cards

10 	10 	10 
10 	10 	10 
10 	10 	10 

Apply the appropriate labels on both ends of each box lid. Either run the labels on full-sheet Avery Labels No. 5165, cut apart and attach; or simply cut apart these pages and glue or tape on.

Shake Those Beans

A PRACTICE & ENRICHMENT BOX

Dice Toss

A PRACTICE & ENRICHMENT BOX

Piggy Bank Subtraction

A PRACTICE & ENRICHMENT BOX

Alligator Subtraction

A PRACTICE & ENRICHMENT BOX

Mountain Subtraction

A PRACTICE & ENRICHMENT BOX

Add, Tell, Spin and Win

A PRACTICE & ENRICHMENT BOX

Subtract, Tell, Spin and Win

A PRACTICE & ENRICHMENT BOX

Add and Think—level 1

A PRACTICE & ENRICHMENT BOX

Math Magic

A PRACTICE & ENRICHMENT BOX

Addition Lotto

A PRACTICE & ENRICHMENT BOX

Subtraction Lotto

A PRACTICE & ENRICHMENT BOX

Subtraction Top Draw

A PRACTICE & ENRICHMENT BOX

Rock Pile

A PRACTICE & ENRICHMENT BOX

Go For It

A PRACTICE & ENRICHMENT BOX

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Go For It

A PRACTICE & ENRICHMENT BOX

Number Muncher

A PRACTICE & ENRICHMENT BOX

Doublesland

A PRACTICE & ENRICHMENT BOX

Fast Tens

A PRACTICE & ENRICHMENT BOX

Fast Nines

A PRACTICE & ENRICHMENT BOX

Fast Nines and Tens Dice Toss

A PRACTICE & ENRICHMENT BOX

Doubles, Neighbors, Nines, Tens and Leftovers Dice Toss

A PRACTICE & ENRICHMENT BOX

Tic Tac Toe

A PRACTICE & ENRICHMENT BOX

Add and Think—level 2

A PRACTICE & ENRICHMENT BOX

21

A PRACTICE & ENRICHMENT BOX

What's Missing?

A PRACTICE & ENRICHMENT BOX

Number Muncher

A PRACTICE & ENRICHMENT BOX

Doublesland

A PRACTICE & ENRICHMENT BOX

Fast Tens

A PRACTICE & ENRICHMENT BOX

Fast Nines

A PRACTICE & ENRICHMENT BOX

Fast Nines and Tens Dice Toss

A PRACTICE & ENRICHMENT BOX

Doubles, Neighbors, Nines, Tens and Leftovers Dice Toss

A PRACTICE & ENRICHMENT BOX

Tic Tac Toe

A PRACTICE & ENRICHMENT BOX

Add and Think—level 2

A PRACTICE & ENRICHMENT BOX

21

A PRACTICE & ENRICHMENT BOX

What's Missing?

A PRACTICE & ENRICHMENT BOX

Money

BOX IT OR BAG IT MATHEMATICS

Practice & Enrichment Boxes

Donna Burk • Allyn Snider
Paula Symonds

Published by The Math Learning Center

Box It or Bag It Mathematics, Practice & Enrichment Box:
Money

Box It or Bag It Mathematics consists of:
- Teachers Resource Guide and Blackline Masters, Kindergarten
- Teachers Resource Guide and Blackline Masters, 1st and 2nd Grade
- Practice & Enrichment Boxes:
  - Shapes
  - Introduction to Measuring
  - Understanding Measuring
  - Reading, Writing & Understanding Numerals 0–10
  - Pattern
  - Arithmetic
  - Money
  - Place Value Counting
  - Place Value Addition & Subtraction

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Money

Practice and Enrichment Boxes

Getting Started

Once you've introduced Money through a variety of group lessons (be sure to see Box It or Bag It Mathematics Teachers Resource Guide, Money,) you will want children to practice and extend their understanding using the activities that follow in this packet. Here are a few things we've found helpful to remember for a successful Independent Practice Time.

Provide no more than 8-12 boxed activities at one time for a class of 30. Too many activities create more than tolerable chaos.

Model each activity thoroughly until children can tell you what to do, step by step. You'll find "box ingredients" and "playing instructions" for each activity in this packet. We use clear contact paper to put them in our box lids so WE can remember what goes in each box and how each game is played. Reading the directions would be too difficult for most primary children.

Resist the temptation to put out all your challenging Boxes at once—provide an equal balance of easy and hard. (If you set out too many difficult Boxes, all the children will need you at once and the noise level will be almost unbearable as your children try to cope with the stress of too many difficult tasks.)

As you construct these Practice and Enrichment Boxes, cover your box tops with the same design contact paper. That way, you'll be able to pull your Money Boxes off the shelf easily, even if they've gotten mixed in with other boxes. (Boxes can be ordered from The Math Learning Center in three sizes: standard (9" X 12" X 2"), half size (9" X 6" X 1-7/8") and junk (4" X 7" X 1-1/8".) See the Box It or Bag It Mathematics Teachers Resource Guide, *MATERIALS INDEX, for additional ordering and making information.*

Remember the Boxes themselves can be used for group instruction. They are ideal for use by an aide or parent with small groups. Some of them can be easily adapted for use with your whole group.

During Independent Practice Time, it's critical that you be available and in circulation to make sure things go smoothly. Once routines even out, you'll have opportunities to observe individuals which are not afforded when you conduct group instruction. You can really spot children with problems or understandings beyond your predictions. See the next page for some observation guidelines.

Money Observation Sheet **NAMES**	**Counting Patterns**				**Names Coins**					**Knows Coin Values**					**Counts Money**				**Counts Mixed Coins**			**Makes Change**	**Writes & Solves Simple Word Problems**
	by ones	by fives	by tens	by twenty-fives	penny	nickel	dime	quarter	half dollar	penny	nickel	dime	quarter	half dollar	pennies to:	nickels to:	dimes to:	quarters to:	pennies and nickels to:	pennies, nickels and dimes to:	pennies, nickels, dimes and quarters to:		

Some General Making Instructions

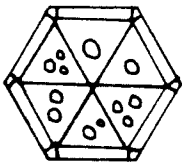
Many of the Boxes have similar game parts. Rather than repeat the making instructions for these every time, we've included them in this section. Many of the gameboards, spinner tops, and cards have been printed for you and are among the blacklines and cardstock included in this packet. We'll always indicate if game materials are in the packet.

SPINNERS

For each spinner you'll need:
- spinner top from blacklines
- two 6 X 6 squares poster or matte board, white or any light color
- two 1 X 1 squares poster or matte board (scraps work just as well as 1" squares and save a great deal of board)
- one regular-sized paper clip
- filament (strapping) tape
- an assortment of pennies, nickels, dimes, and quarters
- clear contact paper

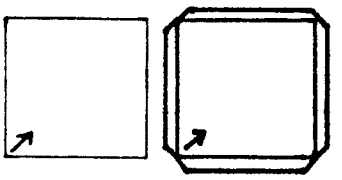
To Do:

1. Glue printed spinner top to one of the 6 X 6 pieces of posterboard. Cut it out. Place real coins over printed coins—no need to glue. (Many teachers have found that matte board is sturdier and lasts longer. Also, rather than cutting out a 6" square for the spinner top, a great deal of board can be saved by gluing all the spinner tops to a large piece of board and then cutting them out.



Snip the edges of the contact paper so you can fold it under.

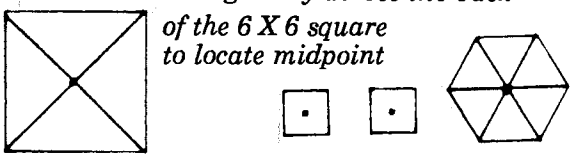
2. Cut a piece of clear contact paper somewhat larger than the spinner top. Place the contact paper over the top and smooth it down around the coins; it will hold them in place. Snip the edges of the contact paper and turn them under the spinner top.



Clip contact paper at the corners so you can fold it under.

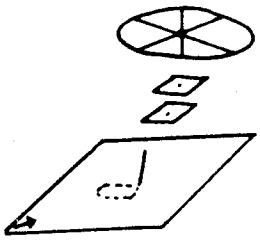
3. Draw a small arrow at the corner of the other 6 X 6 piece of railroad board. Cover the square with clear contact paper, turning the edges under.

Draw lines diagonally across the back of the 6 X 6 square to locate midpoint

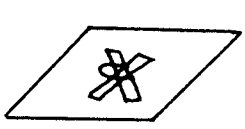


4. To assemble spinner, poke holes through the center of the 6 X 6 square, the two 1 X 1 "washer" pieces, and the center of the spinner top.

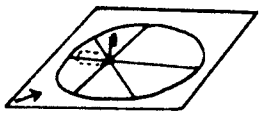
Unfold a paper clip by pulling out the middle section and bending it upwards.



Poke it upward through the squares, the two washers, and the spinner top.



spinner back



spinner front

Tape the paper clip with an "X" of filament tape to the back of the 6 X 6 square to hold the spinner together. Bend down the top point of the paper clip in front and wrap it with a small piece of filament to prevent injury. Be sure to label each spinner with the name of the game. Otherwise, cleanup can be challenging.

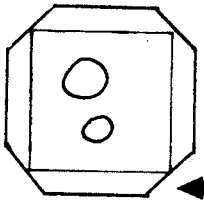
COIN CARDS

You will need:

- 4 X 4 railroad board squares
- an assortment of pennies, nickels, dimes and quarters
- 5-1/2 X 5-1/2 squares of clear contact paper (i.e., enough contact paper to overlap the edges of the cards)

To Do:

1. Although the coins you'll put on cards will vary from game to game, the instructions are the same. Place required coin(s) on 4 X 4 square—no need to glue them down.
2. Put clear contact paper over 4 X 4 square, smoothing down around coin(s). Turn edges under.



Clip contact paper at the corners so you can fold it under

COLORING

Be sure to color (silver or copper) all printed coins on gameboards, spinner tops, and cards unless you're using real coins. Colored coins are a thousand times easier than uncolored coins to identify.

REAL MONEY

Use real money to make games, wherever called for. We've found it makes games far more magical and understandable to kindergartners, first and second graders alike.

COIN TUBES

Coin tubes for pennies, nickels, and dimes are called for in several games. You can get them at dimestores and coin stores. For little fingers, it works well to put your dimes in penny tubes, pennies in nickel tubes, and nickels in quarter tubes. That way they don't get stuck! To help insure that all the coins are put back each time, mark tubes to the level of the coins with a Sanford Sharpie fine tip permanent marker.

COIN STAMPS GAME STORAGE

Coin stamps are widely available. They can also be ordered from The Math Learning Center. As you construct these Independent Practice Boxes, cover your box tops with the same design contact paper. That way you'll be able to pull your Money Boxes off the shelf easily, even if they've gotten mixed in with other boxes. (Boxes can be ordered from The Math Learning Center in three sizes: standard (9 X 12 X 2), half size (9 X 6 X 1-7/8), and junk (4 X 7 X 1-1/8). See the Box It or Bag It Mathematics Teachers Resource Guide, MATERIALS INDEX, for additional ordering and making information.

Coin Graphs— Grades K and 1 (1-4 children)

See Box It or Bag It Mathematics Teachers Resource Guide, MONEY, Coin Graphs, for group introduction to this activity.

Box ingredients→ coin stamps (8) and stamp pads (1 or 2)
spinners (2) record sheets
grey and brown crayons

PLAYING INSTRUCTIONS—Easy

1. Spin the spinner. Read the amount spun.
2. Color in the appropriate box on your graph. Work from bottom to top.
3. Continue spinning, reading, and recording until at least one column is filled.

PLAYING INSTRUCTIONS—Mid-Level

1. Spin the spinner. Read the amount spun.
2. Use a coin stamp to show the coin you spun on your graph. Color in the coin you stamped if you like. Work from bottom to top.
3. Continue spinning, reading, and stamping coins until at least one column is filled.

PLAYING INSTRUCTIONS—Challenging

1. Spin the spinner. Read the amount spun.
2. Record the numerical amount on your graph. Don't forget the cents sign. Work from bottom to top.
3. Continue spinning, reading, and recording until at least one column is filled.

MAKING INSTRUCTIONS

Coin Stamps (8) and Stamp Pads
You'll need two penny stamps, two nickel stamps, two dime stamps, and two quarter stamps. These are available through The Math Learning Center. We have glued real coins on each of our coin stamps so the children can easily recognize each stamp. Get stamp pads from your school office or any other source of business supplies.

Spinners (2)
Locate Coin Graph spinner tops in blacklines. Assemble as directed in the Getting Started section of this packet.

Record Sheets
Locate Coin Graph record sheet in blacklines. Run copies. Store record sheets, spinners, coin stamps, and crayons in standard box.

Money March— Grades K and 1 (2-4 children)

See Box It or Bag It Mathematics Teachers Resource Guide, MONEY, Money March, for group introduction to this activity.

Box ingredients→ gameboard, game markers (4), Spinner (easy, challenging, or both), standard box for storage

PLAYING INSTRUCTIONS—Easy and Challenging

1. Take turns. Spin the spinner. Move your marker the correct number of spaces.
2. The first player to reach the Pot of Gold is the winner.

MAKING INSTRUCTIONS

Gameboard
Locate Money March gameboard in the cardstock portion of this packet. Color with waterbase markers if you wish. Laminate.

Spinners
Locate Money March spinner tops in the blacklines. Make one or both, depending on the needs of your children. See Getting Started for assembly directions.

Game Markers (4)
Use unifix cubes in four different colors, or any other small colored counters. Store game markers, spinner(s), and gameboard in a standard box.

Spin a Half Dollar— Grades K and 1 (2-4 children)

See Box It or Bag It Mathematics Teachers Resource Guide, MONEY, Spin a Half Dollar, for group introduction to this activity.

Box ingredients→ record sheets, spinners (3), pencils (4), standard box for storage

PLAYING INSTRUCTIONS

1. Choose a spinner to use for your entire game.
2. Take turns. Spin the spinner. Cross out appropriate number of pennies to equal the amount shown on the spinner.
3. The first player to cross out all the coins on his/her sheet wins.

MAKING INSTRUCTIONS

Record Sheet
Locate Spin a Half Dollar record sheet in blacklines. Run copies.

Spinners (3)
Locate three Spin a Half Dollar spinner tops in blacklines. Make two, or all three, depending on the needs of your children. See Getting Started for assembly directions. Store spinners, pencils, and record sheets in a standard box.

Spin Two Dollars— Grades 1 and 2 (2-4 children)

Box ingredients→ record sheets
spinner
pencils (4)
standard box for storage

PLAYING INSTRUCTIONS

1. Take turns. Spin the spinner. Cross out appropriate coins to equal the amount shown on the spinner.
2. The first player to cross out all the coins wins.

MAKING INSTRUCTIONS

Record Sheets
Locate Spin Two Dollars record sheet in the blacklines. Run copies.

Spinner
Locate Spin Two Dollars spinner top in blacklines. Assemble as directed in Getting Started. Store spinner, pencils, and record sheets in standard box.

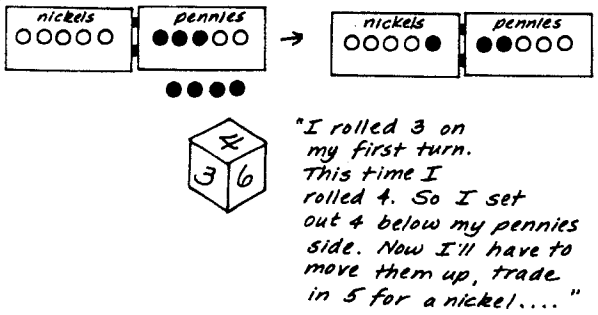
Roll Twenty-Five Cents— Grades K and 1 (2-4 children)

See Box It or Bag It Mathematics Teachers Resource Guide, MONEY, Roll Twent-Five Cents, for group introduction to this activity.

Box ingredients→ trading boards (4)
pennies in a coin tube (20)
nickels in a coin tube (20)
die
junk box for storage

PLAYING INSTRUCTIONS

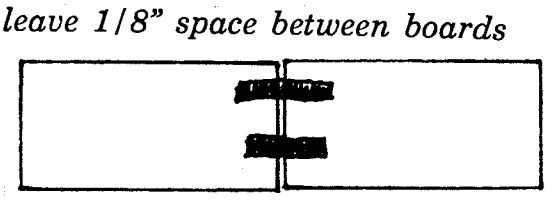
1. Roll die to determine who starts. Highest roll begins.
2. Take turns. Roll die. Set out the number of pennies indicated by the die below the pennies side of your trading board. Once you have them counted out, move them up and make any needed trades.



3. Continue playing until one player reaches 25 cents.

MAKING INSTRUCTIONS

Trading Boards (4)
Locate Roll Twenty-five Cents trading boards in the cardstock portion of this packet. Color in coins. Laminate. Cut apart. Hinge one pennies and one nickels section at the back with two strips of filament tape to make each board.



Pennies and Nickels in Coin Tubes
Put twenty pennies in a nickel tube and twenty nickels in a quarter tube. Mark each tube with a permanent marking pen to the appropriate level when filled. This makes it easy to see if all the coins have been returned at cleanup time.

Die
Use a plain wooden cube or foam cube, available from The Math Learning Center. Mark the numbers 1-6 on your die with a permanent black marker. Store the die, coins in coin tubes, and trading boards in a junk box.

Money Trading Game— Grades 1 and 2 (2-4 children)

Box ingredients→ dice (2) trading boards (4)
pennies in a marked coin tube (40)
dimes in a marked coin tube (40)
half box for storage

PLAYING INSTRUCTIONS—Easy

1. Take turns. Roll the dice. Take the number of pennies rolled. Place them on the pennies side of the scorecard.
2. Each time you get ten pennies, trade for a dime and place the dime on the dime side of your scorecard.
3. The first player to get ten dimes wins.

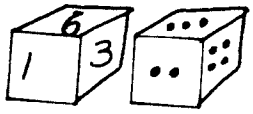
PLAYING INSTRUCTIONS—Challenging

1. Take turns. Start with ten dimes on the dime side of the scorecard. Roll the dice.
2. Remove that amount from your scorecard by trading a dime for ten pennies and then taking the amount rolled away.
3. The first player to get back to .00 wins the game.

MAKING INSTRUCTIONS

Dice
You can provide different sets of dice, depending on the needs of your children. The first set we've used is one dotted dice, 0-6, and one numbered dice, 0-6. A dotted and a numbered dice encourages children to count on; the children say the number and count the dots on.

"Six, seven, eight, nine!"



Other possibilities for dice are:
one numbered 6-11; one dotted 6-11
both numbered 4-9
one dice numbered 10, 20, 30, 10, 20, 30; one numbered 0-6
one dice numbered 9, 9, 9, 10, 10, 10; one numbered 4-9

Trading Boards (4)
Locate the Money Trading Game trading boards in the cardstock portion of this packet. Assemble as directed in Roll Twenty-five Cents. Store trading boards, coins in marked coin tubes, and dice in half box.

Money Sock Boxes— Grades K, 1 and 2 (2-4 children)

Box ingredients→ money sock boxes with coins inside (4) spinner(s) (1-4) standard box for storage

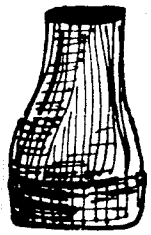
PLAYING INSTRUCTIONS—Easy, mid-level, and challenging

1. Choose a spinner. Game can be easy or more challenging depending on which you choose.
2. One player spins the spinner.
3. Everyone reaches into his or her sock box and tries to pull out the correct coin(s).
4. Once everyone has coin(s) out and counted, put them all back. Pass the spinner to someone else and play again.

MAKING INSTRUCTIONS

Money Sock Boxes (4)
You'll need:
4 tuna or cat food cans with sharp edge taped at top
4 children's stretchy socks
4 pennies, 4 nickels, 4 dimes, and 4 quarters

1. If noise bothers you, glue a circle of felt in the bottom of each can.
2. Pull one stretchy sock over each can.
3. Put one penny, one nickel, one dime, and one quarter in each can.



Spinners (1-4)
Locate Money Sock Boxes spinner tops in blacklines. Choose the spinner(s) most appropriate to your children's needs. Assemble as directed in Getting Started. Store spinner(s) and sock boxes in standard box.

Money Puzzles— Grades K, 1 and 2 (1-4 children)

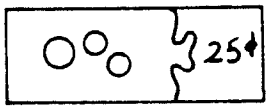
Box ingredients→ money puzzles (25) half box for storage

PLAYING INSTRUCTIONS

1. Put the money puzzles together.
2. Count the money on each puzzle to a friend or teacher.

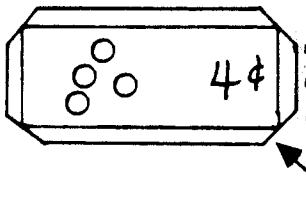
MAKING INSTRUCTIONS

Money Puzzles
You'll need:
25 3 X 8 pieces of railroad board



assortment of pennies, nickels, dimes, and quarters
clear contact paper

1. Place coin(s) on the left-hand side of the card—no need to glue them down.
2. Write money amount on right-hand side.
3. Cover the card with clear contact paper. Smooth paper down around the coins. Turn edges under.



Snip the edges of the contact paper so you can fold it under.

4. Cut puzzle apart in the middle, using some form of puzzle cut.

Kindergarten teachers will probably want to limit coins and coin sums to ten cents and below. First and second grade teachers may go to fifty cents or higher, whatever you can afford.

Store money puzzles in a half box.

Count, Tell, Spin, and Win— Grades K, 1 and 2 (2 children)

Box ingredients→ one "more" card; one "less" card; more or less spinner; coin cards (14-20); half box for storage

PLAYING INSTRUCTIONS

1. Put all the coin cards face down in a pile.
2. Each player takes a card.
3. Each player counts money on card.
4. Label cards with "more" and "less" card.
5. Spin the spinner to see who wins.
6. Player who wins takes both cards.
7. When all the coin cards have been used, each player counts cards.
8. Label winnings piles with "more" or "less" cards
9. Spin to see who wins the game.

MAKING INSTRUCTIONS

More and Less Cards
Find the more and less cards in blacklines. Cut, color, mount on tag, and cover with clear contact paper or laminate.

Spinner
Find spinner top in blacklines. Color. Assemble as directed in Getting Started.

Coin Cards (14-20)
Make a set of 14-20 different coin cards (see Getting Started for directions) with sums appropriate to the needs of your children.

Easy—varying sums of pennies, all less than ten cents and/or pennies and nickels to ten cents.

Mid-level—pennies, nickels, and dimes, varying sums to twenty-five cents.

Challenging—pennies, nickels, dimes, and quarters, varying sums to $1.00.

Store coin cards, more and less cards, and spinner in half box.

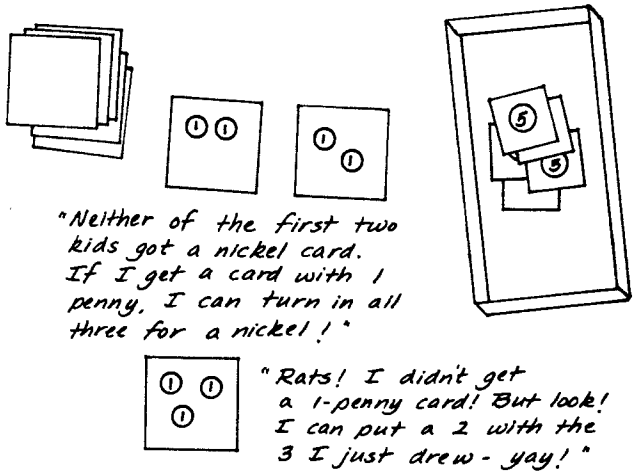
Earn A Nickel— Grades K and 1 (2-4 children)

Box ingredients→ pennies cards (22) nickel cards (10)

half box for storage

PLAYING INSTRUCTIONS

1. Place the pennies cards face down in a pile.
2. Put nickel cards in the box lids—this is the "bank".
3. Turn one pennies card face up. If it has five pennies on it, you can turn it in to the bank for a nickel. If it's less than five, leave it face up in the middle. It's now community property.
4. Let your partner or the person to your left turn another pennies card up. Can he or she add the two cards to make exactly five cents? If so, he/she can turn the two cards in to the bank for a nickel card. If not, play passes to the next person.



5. Continue around the circle, or with your partner, drawing cards, placing them in the middle and making trades to the bank for nickels when you can. The game is over when all the cards have been turned up and no more trades can be made. There may be a few pennies cards left—that's O.K. The player with the most nickel cards at the end wins.

MAKING INSTRUCTIONS

Coin Cards

You'll need:

- 10 nickels
- 58 pennies
- 10 pieces 2 X 2 poster board for nickel cards
- 22 pieces 4 X 4 poster board, in a different color
- clear contact paper

Make:

- 10 nickel cards
- 8 cards with 1 cents
- 4 cards with 3 cents
- 4 cards with 3 cents
- 4 cards with 4 cents
- 2 cards with 5 cents

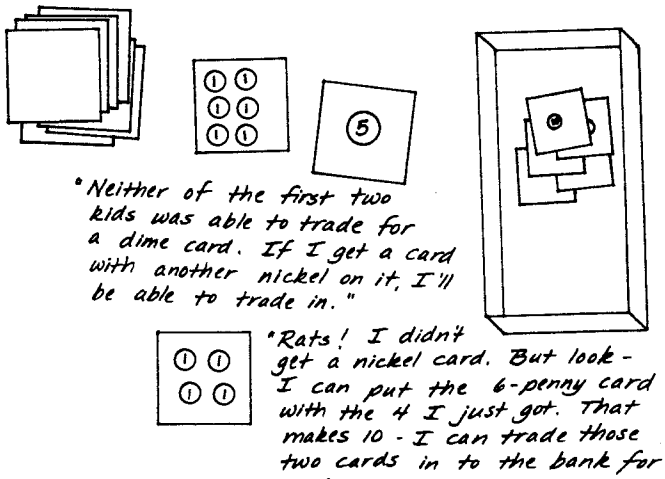
See Getting Started for assembly directions. Store coin cards in half box.

Earn A Dime— Grades 1 and 2 (2-4 children)

Box ingredients→ pennies cards (20) nickel cards (3)
dime cards (10) half box for storage

PLAYING INSTRUCTIONS

1. Place the pennies and nickel cards face down in a pile.
2. Put dime cards in the box lid. This is "the bank".
3. Turn one pennies or nickel card face up. Leave it in the middle. It's now community property.
4. Let your partner or the person to your left turn another card up. Can he or she add the two cards to make exactly ten cents? If so, he/she can trade the two cards in to the bank for a dime card. If not, play passes to the next person.



5. Continue around the circle or with your partner, drawing cards, placing them in the middle and making trades to the bank for dimes when you can. The game is over when all the cards have been turned up and no more trades can be made. There may be a few cards left in the middle—that's O.K. The player with the most dimes cards at the end wins.

MAKING INSTRUCTIONS

Coin Cards

You'll need:
- 10 dimes
- 3 nickels
- 66 pennies
- 10 pieces 2 X 2 poster board for dime cards
- 23 pieces 4 X 4 poster board, in a different color, for other coin cards
- clear contact paper

Make:
- 10 dime cards
- 4 cards with one cents
- 4 cards with two cents
- 4 cards with three cents
- 3 cards with four cents
- 2 cards with five cents
- 3 nickel cards
- 2 cards with six cents
- 1 card with eight cents

See Getting Started for assembly directions. Store coin cards in half box.

The Store— Grades K, 1 and 2 (1-4 children)

Box ingredients→ store items (16-20)

coins in marked coin tubes (amount and type will vary with grade level

standard box for storage

PLAYING INSTRUCTIONS—Easy

1. Take ten pennies.
2. Choose something to buy from the store.
3. Lay out the correct amount of money beside it.
4. Continue choosing until you no longer can buy anything.
5. Take your ten pennies back and start again.

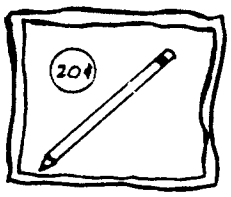
PLAYING INSTRUCTIONS—Challenging

1. Take ten dimes.
2. Choose something to buy from the store.
3. Lay out the correct amount of money beside it.
4. Continue choosing until you no longer can buy anything.

MAKING INSTRUCTIONS

Coins in Marked Tubes
You'll need 40 pennies in a tube for the easy game. For the challenging version, you'll need 40 dimes, 20 nickels, and 30 pennies in marked coin tubes. (The nickels and pennies are for making change.)

Toys
You'll need:
16-20 small toys or stationery items, each priced under $.60, if possible. Balloons, toy scissors, an eraser, a small tablet, two barrettes, a pencil, a plastic toy car, are all possibilities. (If you're making the easy version of The Store, you'll want to disregard and probably remove the items' real prices and mark amounts of one cent-6 cents on each.)



filament (strapping) tape
small ziplock bags

Bag each toy and edge with filament tape. Mark each bag with the item's price unless the item itself is clearly marked.

Lenore Rukasin, of Los Angeles, brought a wonderful machine to class that heat sealed plastic bags in no time at all. If you know anyone who has one for preparing freezer foods, borrow it. It would save so much time.

Store coins in marked coin tubes and store items in a standard box.

Top Draw— Grades K, 1 and 2 (2-4 children)

Box ingredients→ coin cards (20-30) half box for storage

PLAYING INSTRUCTIONS

1. Put all the coin cards face down in a pile.
2. Take turns taking a card and counting the money on your card.
3. The person with the most money captures every players' card.
4. If two players draw cards with the same value, each player draws one more card.

5. The player with the most cards at game's end wins.

MAKING INSTRUCTIONS

Coin Cards
Assemble coin cards as directed in Getting Started. Kindergarten teachers should limit the coins and sums of coins to ten cents and below. First and second grade teachers can include sums as high as they can afford (ours go up to $.40 on some cards). Make 20-30 cards in either case.

Store coin cards in half box.

Dig for Buried Treasure— Grades K, 1 and 2 (2-4 children)

See Box It or Bag It Mathematics Teachers Resource Guide, Grades 1 and 2, Chapter 6, Capture the Money, for group introduction to this activity.

Box ingredients→ gameboard money box game cards standard box for storage

PLAYING INSTRUCTIONS—Easy, mid-level, and challenging

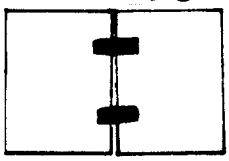
1. Put all the money out on the gameboard. Match each coin to a printed coin. Mix up the game cards and put them in a pile, face down.
2. Take turns. Draw a card. Find on the board the coordinate the card names. Remove the coin.
3. Play until all the money has been taken off the board. The person with the most money wins.

MAKING INSTRUCTIONS

Gameboard
Locate Dig for Buried Treasure gameboards (2 sheets each) in the cardstock portion of this packet. There are three different versions: easy, mid-level, and challenging. Choose the one most appropriate to your group. (You may even want to make two separately boxed versions for your class. It's a very popular game.)

Color the coins. Laminate or cover both halves with clear contact paper. Hinge the two halves.

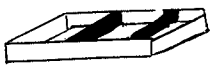
back of gameboard



Leave 1/8" between sections when you hinge them so gameboard will fold easily for storage

Game Cards
Locate the game cards in the cardstock portion of this packet. They'll work for any version of the game. Laminate. Cut apart.

Money Box
Use a junk box to hold coins. Using a hot glue gun or tacky glue, glue cardboard dividers into box to separate coins if you're making the mid-level or challenging version of the game. Label each section by stamping the coin and how many in bottom of box.



For the easy version of Dig for Buried Treasure, you'll need 36 pennies. For the mid-level version, you'll need 17 pennies, 12

nickels, and 7 dimes. For the challenging version, you'll need 9 pennies, 9 nickels, 9 dimes, and 9 quarters.

Store box of coins, game cards, and gameboard in a standard box.

Penny Push— Grades K, 1 and 2 (2-4 children)

Box ingredients→

- gameboard
- one penny to push
- money starter cards (4)
- standard box for storage
- money box
- one penny pusher

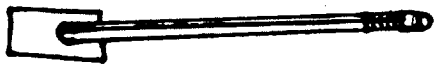
PLAYING INSTRUCTIONS—Easy and challenging

1. Each player needs to take a money starter card. Cover your card with the appropriate coins. If this is the easy version, you'll need 25 pennies. If this is the challenging version, you'll be taking one quarter, three dimes, three nickels, and five pennies to start.
2. Players take turns pushing penny on top of the pictured toys on the gameboard.
3. They buy the toy and count out the money they need (including figuring change if necessary).
4. More than one player can buy an object if they land on it.
5. When players can no longer buy items, the game ends.
6. The player with the least amount of money at the game's end wins.

MAKING INSTRUCTIONS

Gameboard
Locate Penny Push gameboard in blacklines. Color. Label each toy on the gameboard with a price. If you're making the easy version, price each toy less than ten cents; toys can be priced up to twenty-five cents for the challenging version. Glue the gameboard to the bottom of the gamebox. Cover with clear contact paper. Using a hole punch, punch a hole in the side of the box, low and right, in front of the penny for the "penny pusher" to go through.

Penny Pusher
Make the penny pusher by gluing a 1/2 X 1 piece of heavy tag to the end of an unsharpened pencil. Use super tacky glue or a hot glue gun. Or, get a parent to do doweling and wood for you.



Money Box
Use a junk box to hold coins. It will need to be divided if you're making the challenging version of Penny Push (see Dig for Buried Treasure for directions). The easy version will take 100 pennies. The challenging version will require 20 pennies, 15 nickels, 15 dimes, and 4 quarters.

Money Starter Cards
Locate Penny Push money starter cards in cardstock portion of this packet. Color, laminate, and cut apart. Store money starter cards, money box, penny pusher, the one penny to push, and gameboard in a standard box.

Shopping Spree— Grades K, 1 and 2 (2-4 children)

Box ingredients→

- gameboard
- money box
- toys (28)
- one die
- game markers (4)
- money starter cards (4)
- standard box for storage

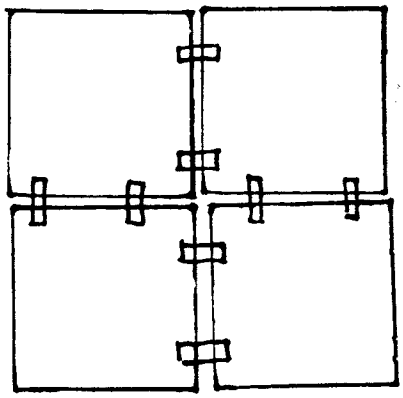
PLAYING INSTRUCTIONS—Easy and challenging

1. Take a money starter card. Cover it with the appropriate coins. If this is the easy version, each player will start with 25 pennies. If this is the challenging version, you'll be taking 10 dimes to start. (The game can be made still more challenging by having each player start with four quarters.)
2. Then players take turns rolling the die and moving on the gameboard.
3. If a player lands on a space with instructions, he/she follows the instructions.
4. If a player lands on a toy, he/she decides whether or not to buy.
5. Play continues this way until all players reach the end.
6. If a player goes bankrupt before reaching the end of the game, he/she begins again at start.
7. The player with least amount of money at the end of the game wins.

MAKING INSTRUCTIONS

Game Boards

1. Color the coins on the game board in appropriate colors.
2. Contact or laminate each board separately. You may want to do front and back for extra sturdiness!
3. Lay the sheets down matching A to A, B to B, and then joining in center.
4. Tape the sheets together with filament tape on the back side, leaving 1/8" space between taped sheets to insure easy folding.



Die

Label a plain wooden or foam cube with numerals 1-6. Use a permanent black marking pen.

Toys (28)

Package and price 28 tiny toys. (See The Store for packaging instructions.) If you're making the easy version, price toys ten cents and under; price up to thirty cents for challenging version.

Game Markers (4)

Use unifix cubes in four different colors or other small colored markers.

Money Box

Use a junk box to hold coins. It will need to be divided if you're making the challenging version of Shopping Spree (see Dig for Buried Treasure for directions). The easy version will take 100 pennies. The challenging version will require 40 dimes, 20 nickels, and 20 pennies. If you're planning to have players start with four quarters each, your money box should contain 16 quarters, 20 dimes, 20 nickels, and 20 pennies.

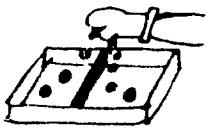
Money Starter Cards
Locate Shopping Spree money starter cards in cardstock portion of this packet. Color, laminate, and cut apart. Store money starter cards, money box, game markers, toys, die, and gameboard in a standard box.

Drop the Money— Grades 1 and 2 (1-4 children)

Box ingredients→ money drop boxes (6) record sheets
standard box for storage

PLAYING INSTRUCTIONS

1. Drop the money.



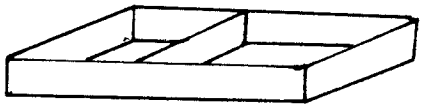
2. Write down what happened.

17 + 8 = 25¢

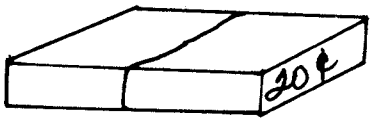
MAKING INSTRUCTIONS

Drop Boxes (6)
You'll need:
- 6 junk boxes with tops
- 6 pieces of heavy cardboard, 4 X 1
- heavy craft glue or hot glue gun
- patterned contact paper and elastic for each box, if desired
- pennies, nickels, dimes, and quarters

1. Construct junk boxes.
2. Glue cardboard pieces into bottoms of junk boxes, using generous amounts of glue.



3. Cover junk box tops with patterned contact paper and band with elastic, if desired.
4. Put a different sum of money in each box. First grade teachers may want to put a different number of pennies in each box to start, then mixtures of pennies, nickels, and dimes later. Second grade teachers may want to include nickels, dimes, and quarters, creating larger sums in each box. In any case, label each box with the amount you put in.



Record Sheets
Locate Drop the Money record sheet in blacklines. Run copies. Store record sheets and money drop boxes in standard box.

Stamp the Price— Grades 1 and 2 (1-4 children)

Box ingredients→ small toy items (16-20)
coin stamps (8) and stamp pads (1 or 2)
record sheets standard box for storage

PLAYING INSTRUCTIONS

1. Choose something to buy.
2. Write the name and price of your item.
3. Stamp the price.
4. Repeat steps 1-3 until your record sheet is filled.

MAKING INSTRUCTIONS

Small Toy Items (16-20)
See The Store making instructions for toy ideas and packaging/labeling directions.

Coin Stamps (8)
You'll need two penny stamps, two nickel stamps, two dime stamps, and two quarter stamps. These are available through The Math Learning Center. We have glued real coins on each of our coin stamps so the children can easily recognize each stamp. Get stamp pads from your school office or any other source of business supplies.

Record Sheets
Locate Stamp the Price record sheet in blacklines. Run copies. Store record sheets, coin stamps, stamp pads, and small toys in standard box.

Stamp the Price Twice— Grades 1 and 2 (1-4 children)

Box ingredients→ small toy items (16-20)
coin stamps (8) and stamp pads (1 or 2)
record sheets standard box for storage

PLAYING INSTRUCTIONS

1. Choose an item to buy.
2. Stamp the price.
3. Find other ways to stamp the price. If you run out of room on the front, turn your paper over.

MAKING INSTRUCTIONS

See Stamp the Price for making instructions. The only difference between the two games is the record sheets. Many teachers choose to keep both record sheets in the same box rather than making the game twice.

Coin Stamp Booklets— Grades 1 and 2 (1-4 children)

Box ingredients→ record sheets

coin stamps (8) and stamp pads (1 or 2)

standard box for storage

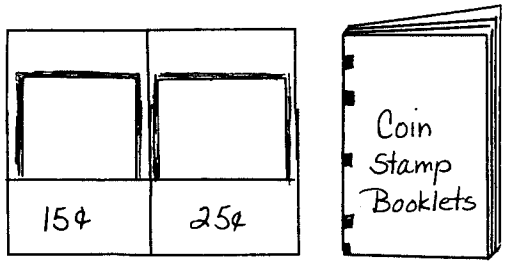
PLAYING INSTRUCTIONS

1. Pick out a book page for your coin stamp booklet.
2. Figure out different ways to stamp out the amount of money on the booklet cover using the coin stamps.
3. After you've completed the page, you may cut it apart and staple it to make a small book.

MAKING INSTRUCTIONS

Coin Stamps (8)
You'll need two penny stamps, two nickel stamps, two dime stamps, and two quarter stamps. We glue real coins on each of our coin stamps so the children can easily recognize each stamp. Get stamp pads from your school office or any other source of business supplies.

Record Sheets
Locate Coin Stamp Booklet record sheets in blacklines. Run copies of each. You can buy student folders, the kind with the pocket at the bottom, cut them down slightly to fit in your box, and tape them together to hold the record sheets.



Store record sheets, coin stamps, and ink pads in standard box.

Shop the Ads— Grades 1 and 2 (1-4 children)

Box ingredients→ catalog and newspaper ads

newsprint, 12 X 18 gluesticks or paste

coin stamps (4) oversized stamp pad

dollar stamp, five-dollar stamp, ten-dollar stamp

standard box for storage

PLAYING INSTRUCTIONS

1. Choose an ad for something you'd like to buy.
2. Paste your ad on a piece of paper.
3. Use the money stamps to stamp out how much you'd have to pay.

MAKING INSTRUCTIONS

Catalog and Newspaper Ads
Have students or parents cut ads from newspapers or catalogs of things children would be interested in buying: toys, games, bikes, scooters, computer or video equipment, etc. Make sure each ad is clearly labeled with

its real price. It helps to keep all ads in a junk box inside the game box.

Newsprint
Fold 12 X 18 newsprint in half so it will fit in your box.

Coin Stamps
You'll need one penny stamp, one nickel stamp, one dime, and one quarter stamp.

Dollar Stamps
You'll need a dollar stamp, a five-dollar stamp, and a ten-dollar stamp. These can be purchased, along with an oversized ink pad, from Lakeshore or other educational supply outlets. An alternative to stamps is to run copies of the fake bills from the blackline section of Box It or Bag It Mathematics Teachers Resource Guide, Grades 1-2. Cut the bills apart and store them in tag pockets. Children can glue these down. Store fake bills or bill stamps and ink pad, coin stamps, newsprint, and ads in a standard box.

Park and Shop— Grades 1 and 2 (2-4 children)

See Box It or Bag It Mathematics Teachers Resource Guide, Grades 1 and 2, MONEY, Park and Shop, for group introduction to this activity.

Box ingredients→ die gameboard game markers (4)

40 dimes, 20 nickels, and 30 pennies in coin tubes

money starter cards

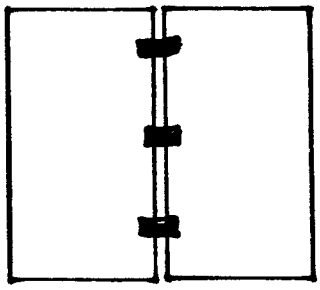
standard box for storage

PLAYING INSTRUCTIONS

1. Take turns. Roll the die. Move your marker correct number of spaces. If you want to buy what's in the space you land on, pay the correct amount. If you don't want to buy it, that's O.K.—just stay there until your next turn. If the space you land on says, "Earn five cents", get five cents. If it says, "Pay five cents", give up five cents. If you land on a space where someone's already bought the item, you can buy it, too—just give up the correct amount.
2. Keep playing until everyone's off the board. The player who spent closest to $1.00 without going bankrupt wins.

MAKING INSTRUCTIONS

Gameboards
Locate Park and Shop gameboard in tag portion of packet. Color and laminate or contact. Hinge on the back with filament tape. This way it will fold to go in your box.



Leave 1/8" between sections so gameboard will fold easily for storage

Game Markers (4)
Use unifix cubes in four different colors or other brightly colored markers.

Die
Use a wooden or foam cube to make one die, dotted or numbered 0-5.

Money in Coin Tubes
Put 40 dimes in a penny tube, 20 nickels in a quarter tube, and 30 pennies in a nickel tube. Mark each tube with a permanent marking pen to the appropriate level when filled. This makes it easy to see if all the coins have been returned at cleanup time.

Money Starter Cards (4)
Locate Park and Shop money starter cards in cardstock portion of this packet. Color, laminate and cut apart. Store starter cards, coins in tubes, die, game markers, and gameboard in standard box.

Make Change— Grades 1 and 2 (1-4 children)

See Box It or Bag It Mathematics Teachers Resource Guide, Grades 1 and 2, MONEY, Making Change, for group introduction to this activity.

Box ingredients→ money box, record sheets, spinner, assorted toys (16-20), standard box for storage

PLAYING INSTRUCTIONS

1. Choose a toy to buy.
2. List the item and cost on the record sheet.
3. Spin the game spinner to determine the money you will use to play.
4. Pay and use the money box to figure out how much change you get back.
5. Write the amount of change on record sheet.

MAKING INSTRUCTIONS

Spinner
Locate Make Change spinner top in blacklines. Assemble as directed in the Getting Started section of this packet.

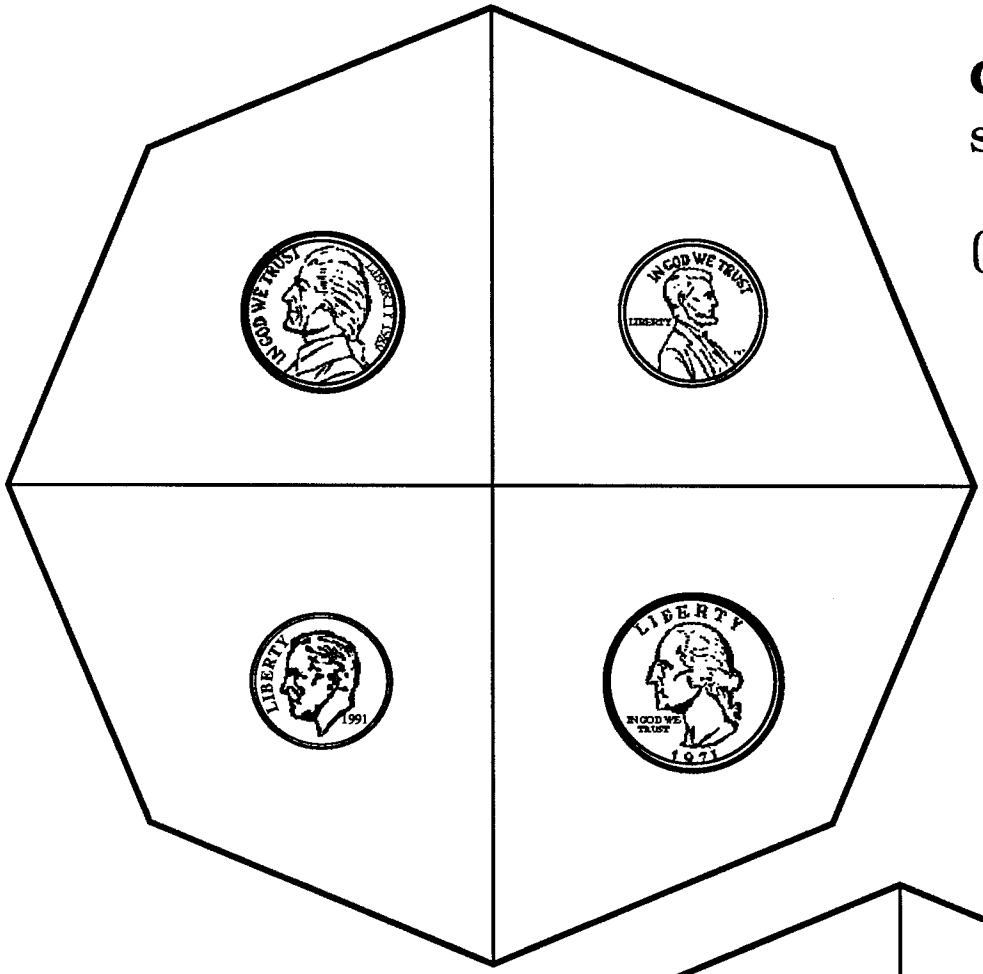
Money Box
Use a junk box to hold coins. See Dig for Buried Treasure for directions. This box will need to be divided into five compartments; the game requires 20 pennies, 10 nickels, 10 dimes, 4 quarters, and 2 half dollars.

Assorted Toys (16-20)
Package and price 16-20 toys under twenty-five cents. See The Store for instructions.

Record Sheet
Locate Make Change record sheet in blacklines. Run copies. Store record sheets, toys, money box, and spinner in standard box.

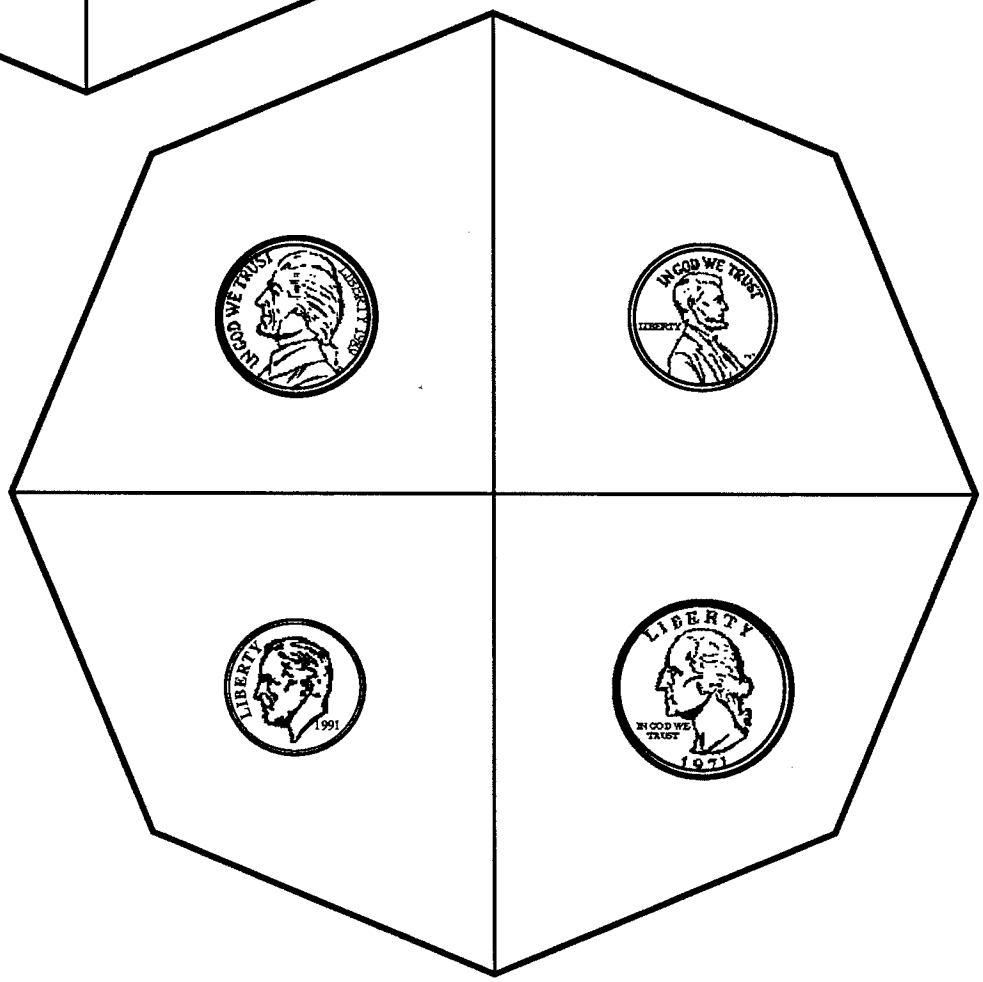
Blacklines

Patterns, cards, spinners, and other materials you'll make for the Practice & Enrichment Boxes described in this packet.



Coin Graph
spinner tops

(Make with real coins)

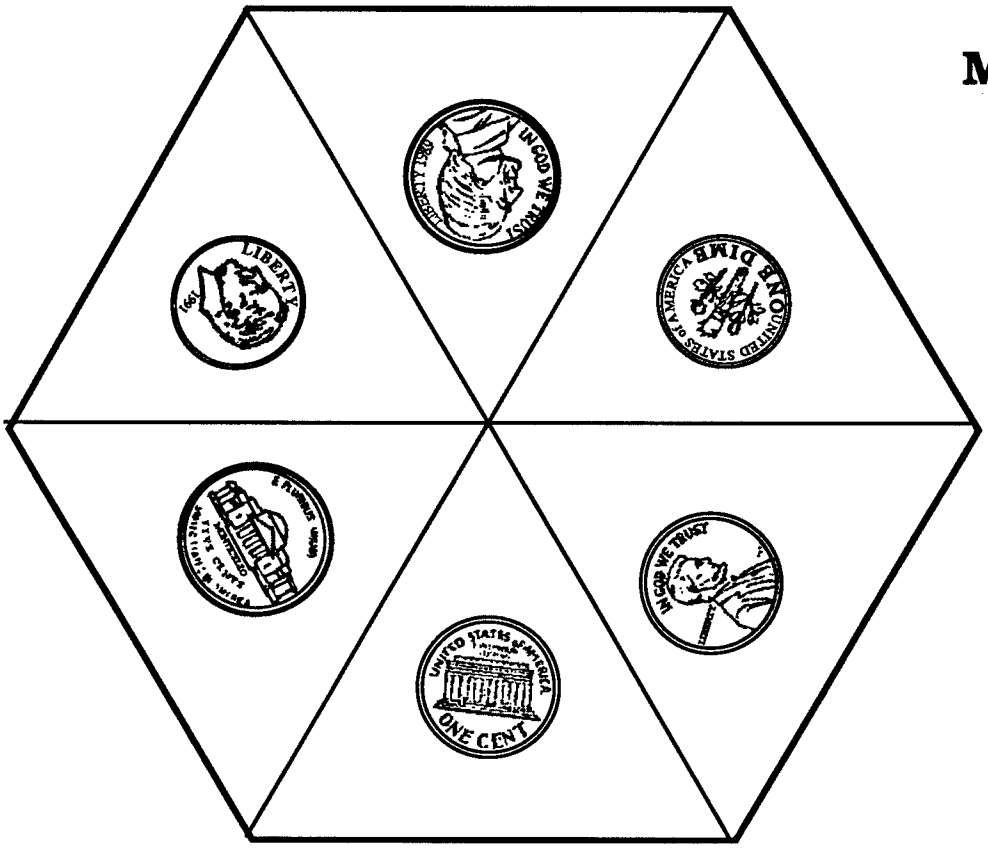


Coin Graph

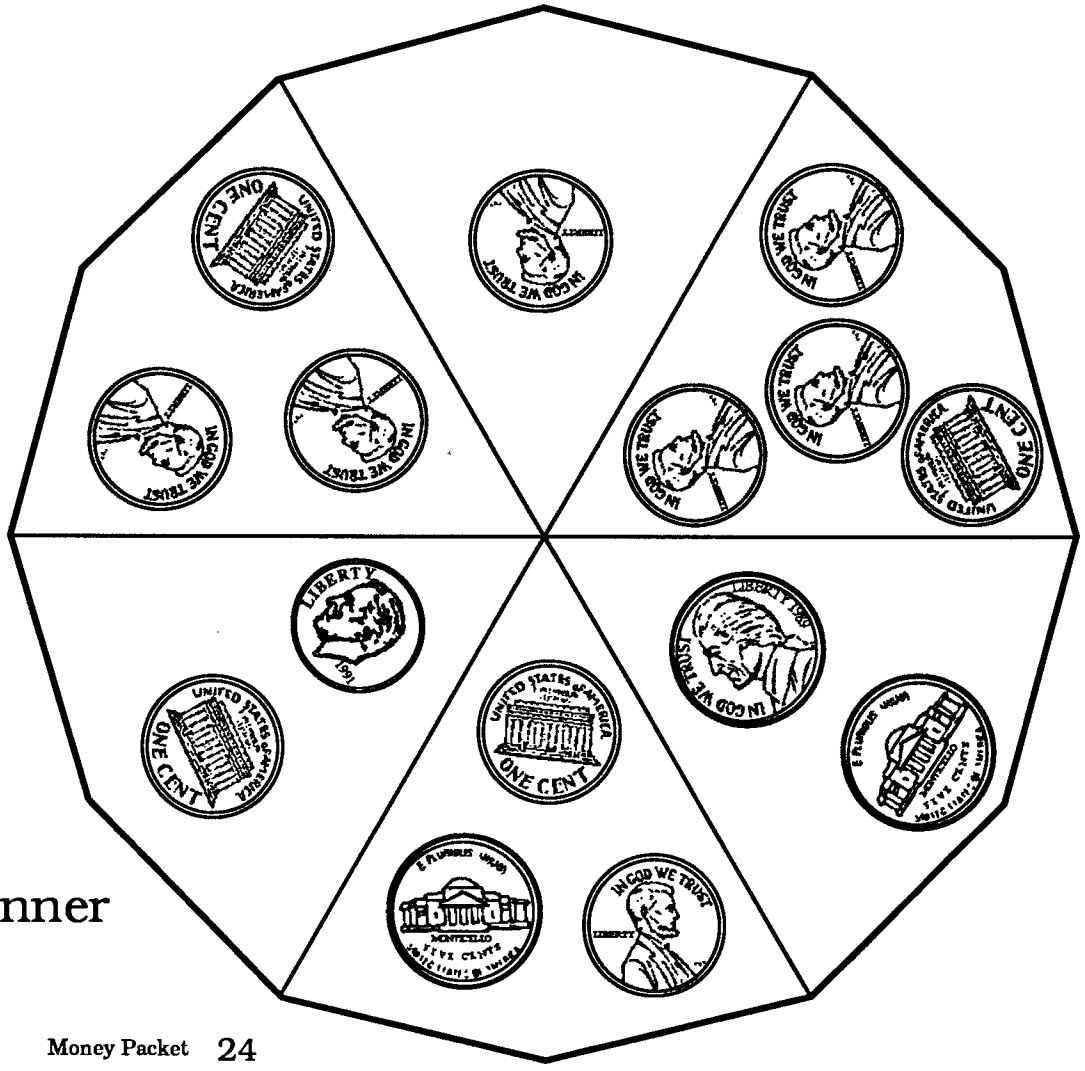
name _____

 1¢	 5¢	 10¢	 25¢

Money March

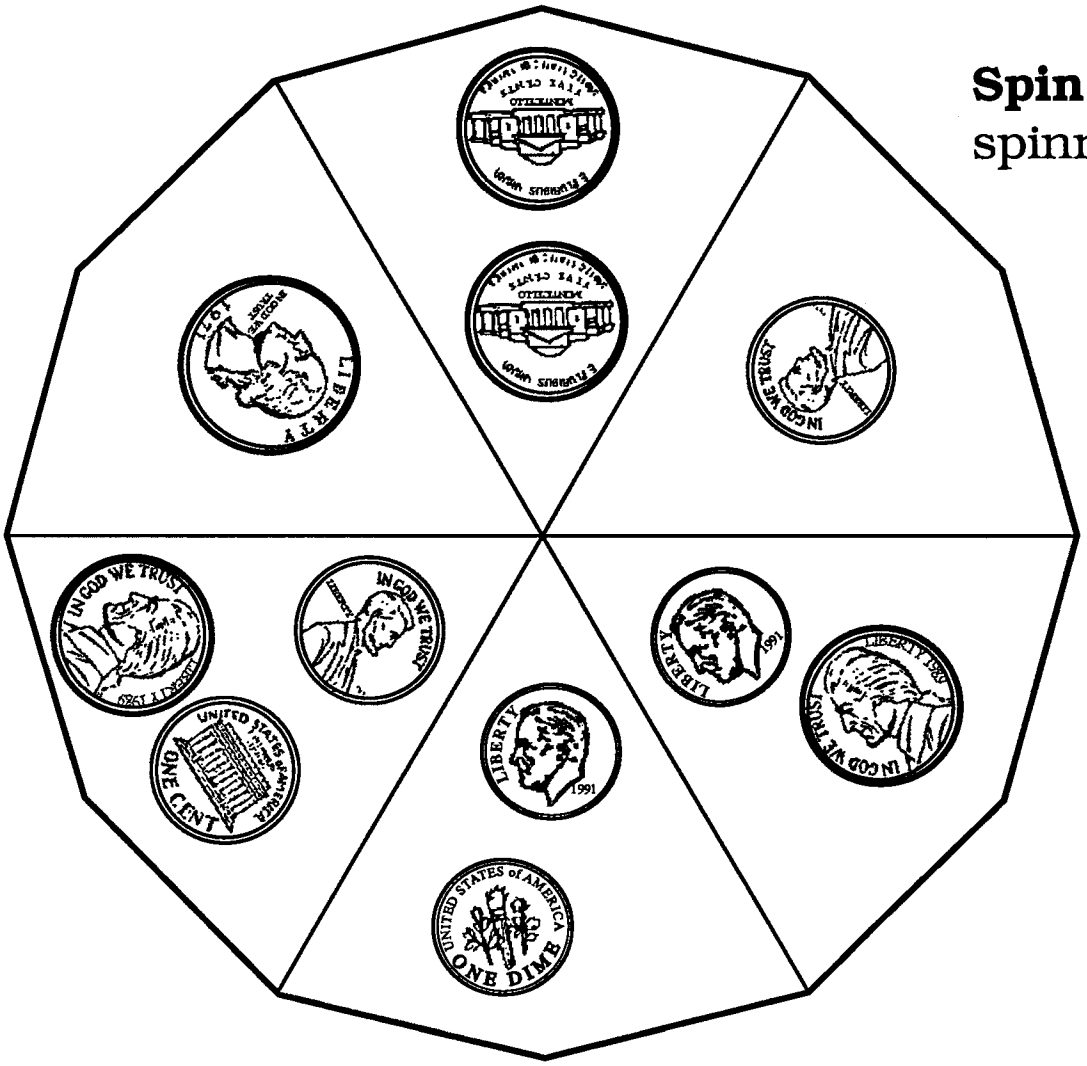


easy spinner

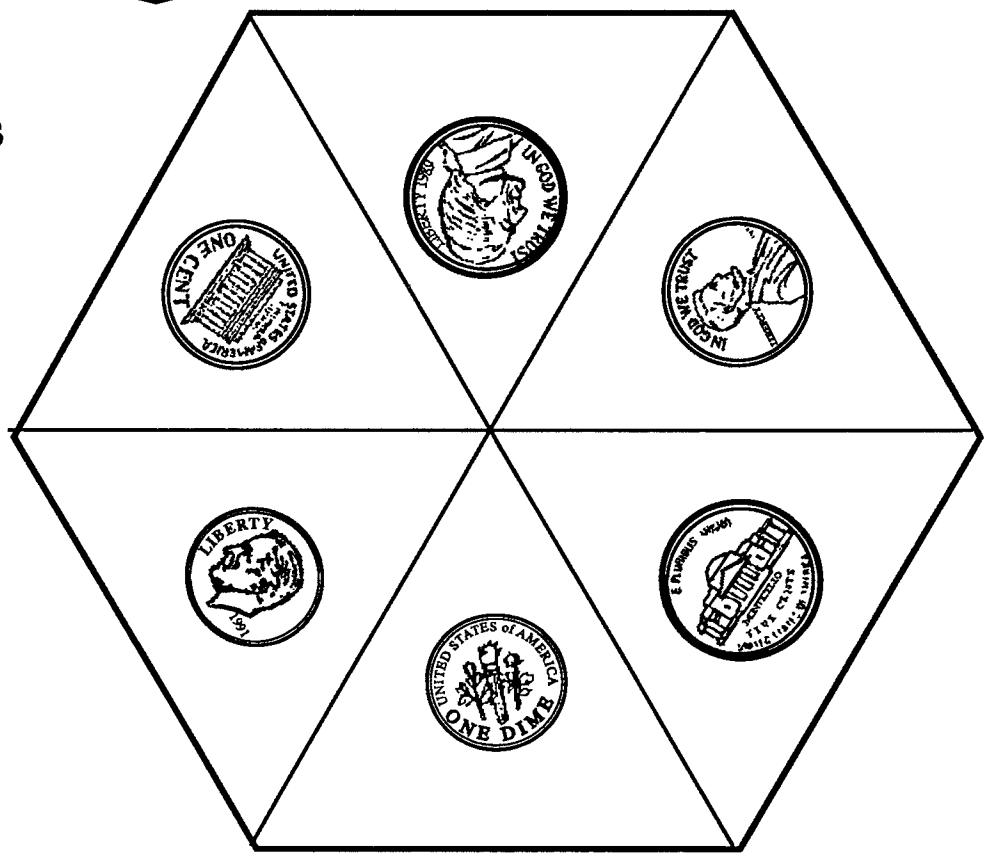


challenging spinner

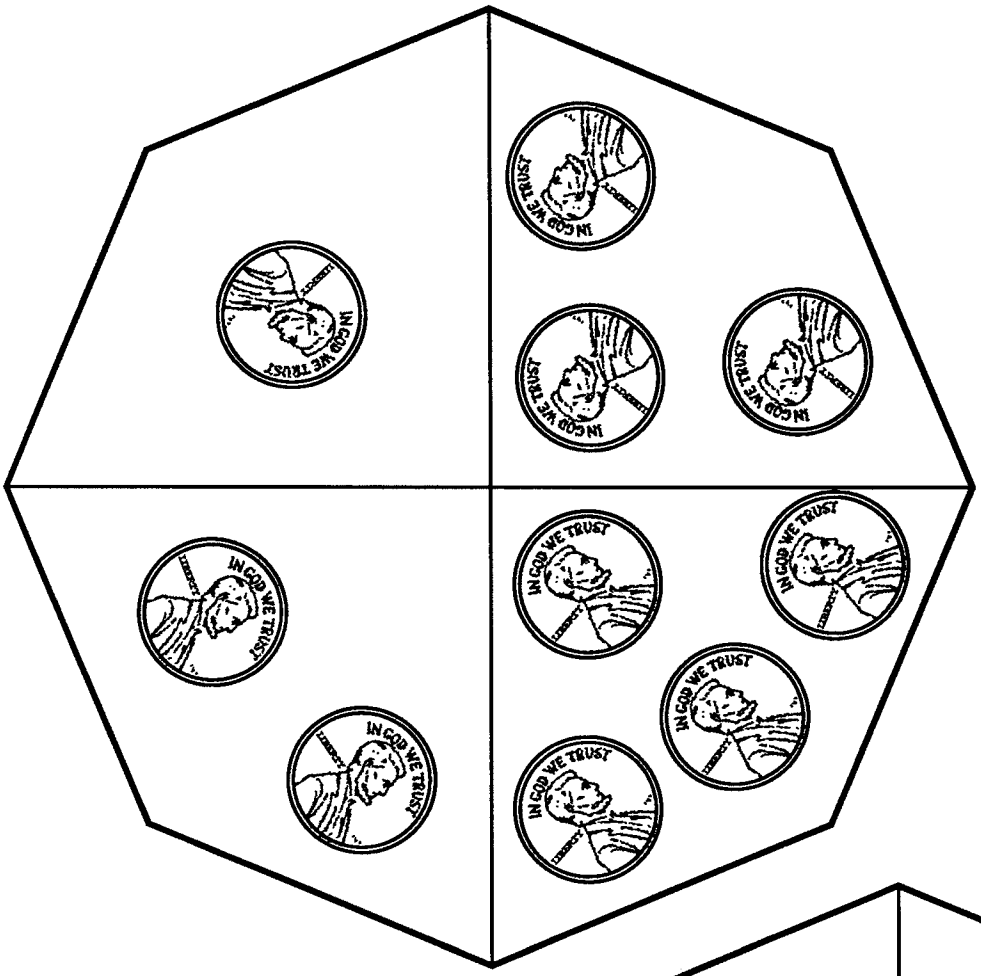
Spin Two Dollars
spinner top

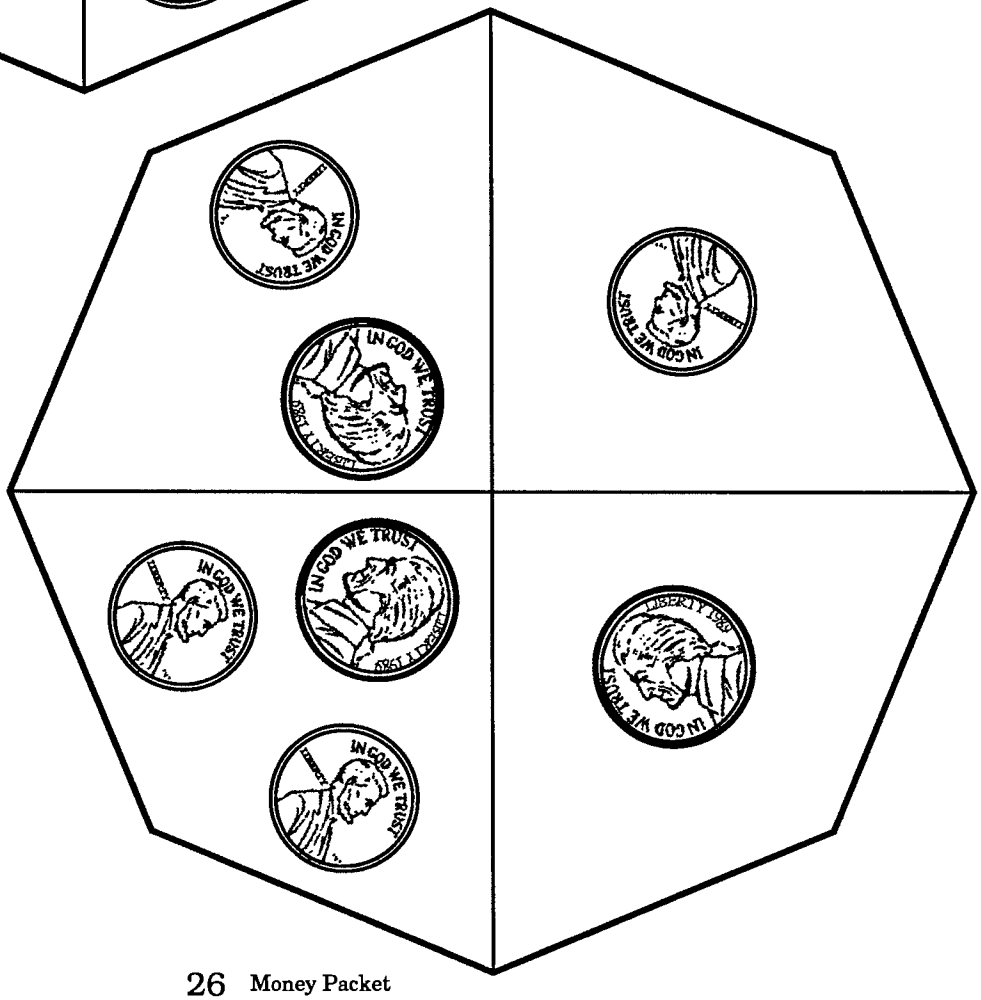


Spin Fifty Cents
spinner top

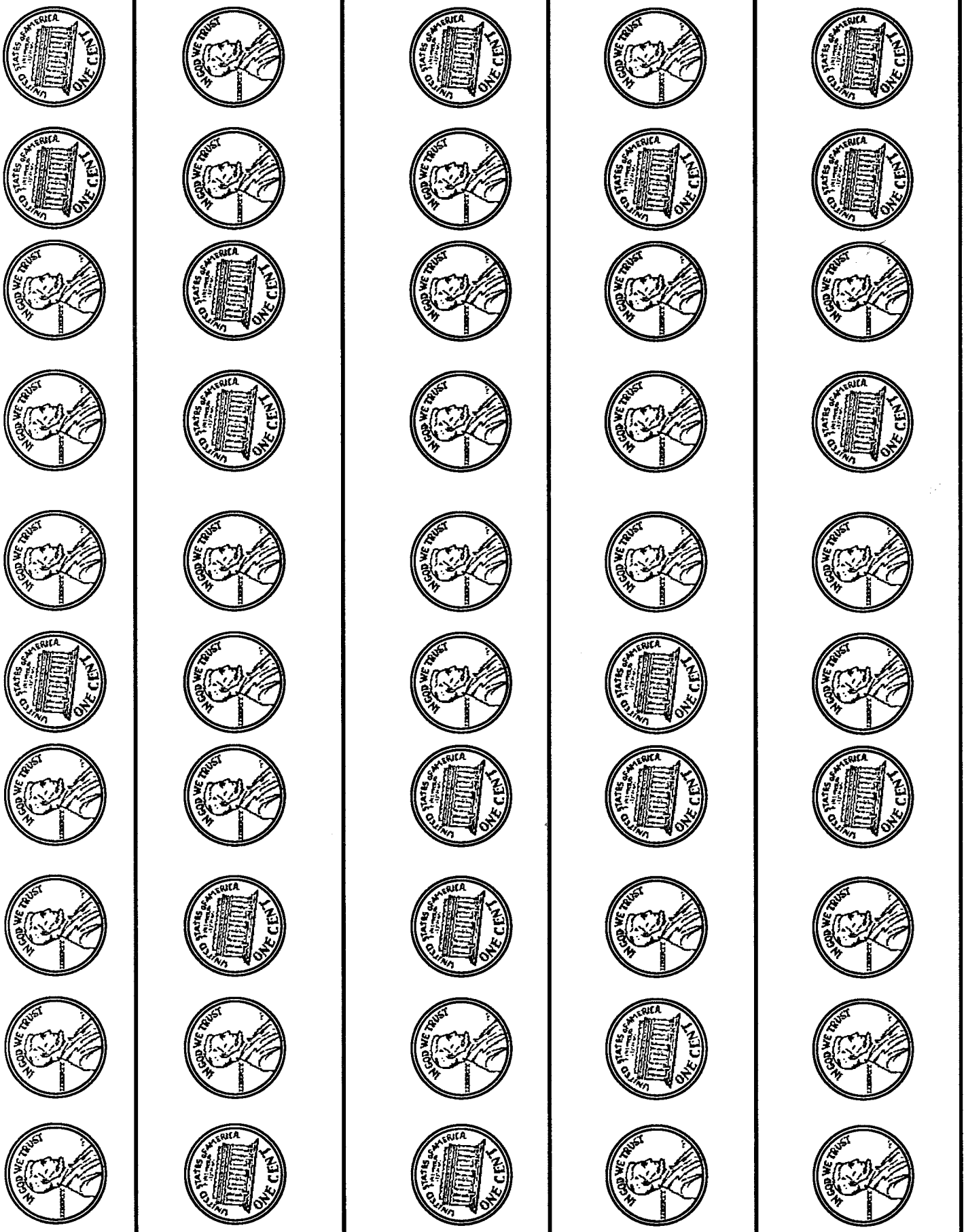


Spin Fifty Cents
optional spinner tops

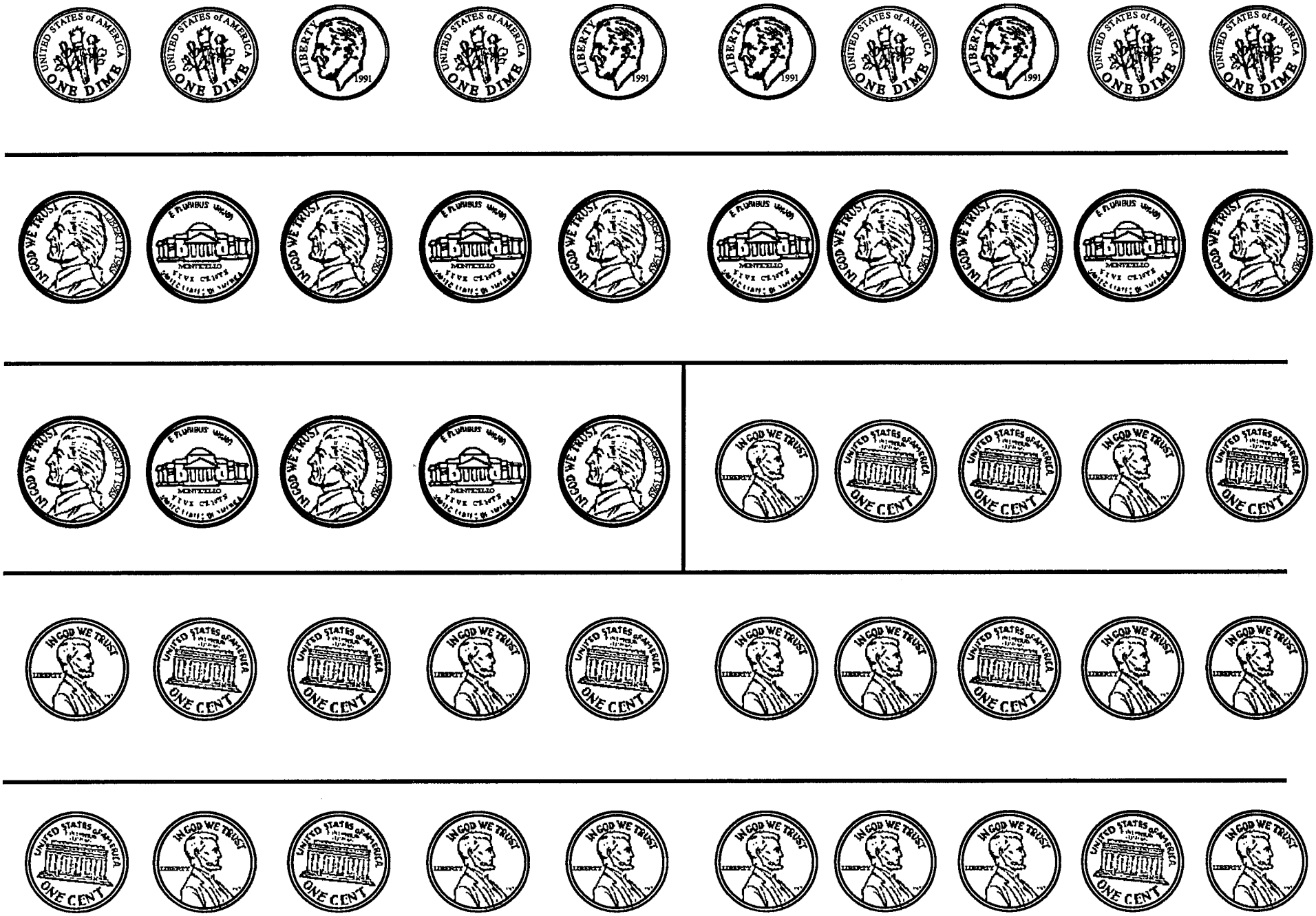




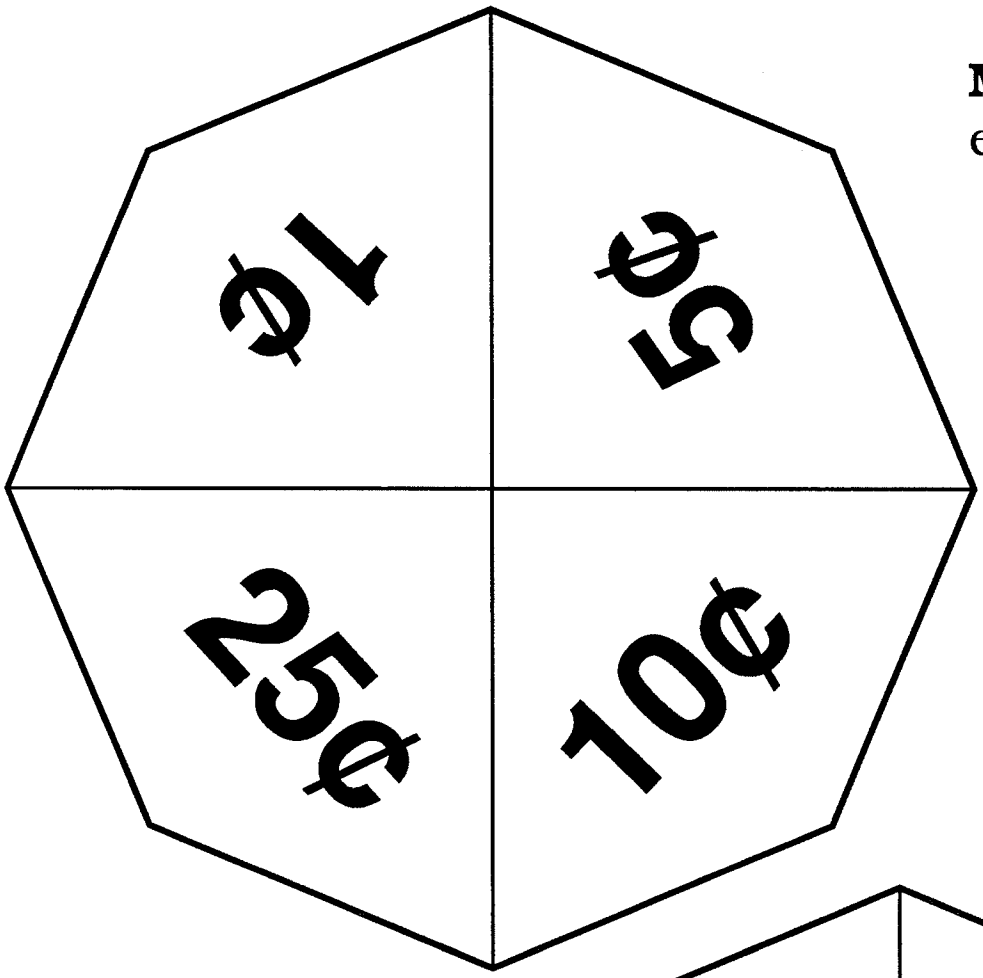
Spin Fifty Cents

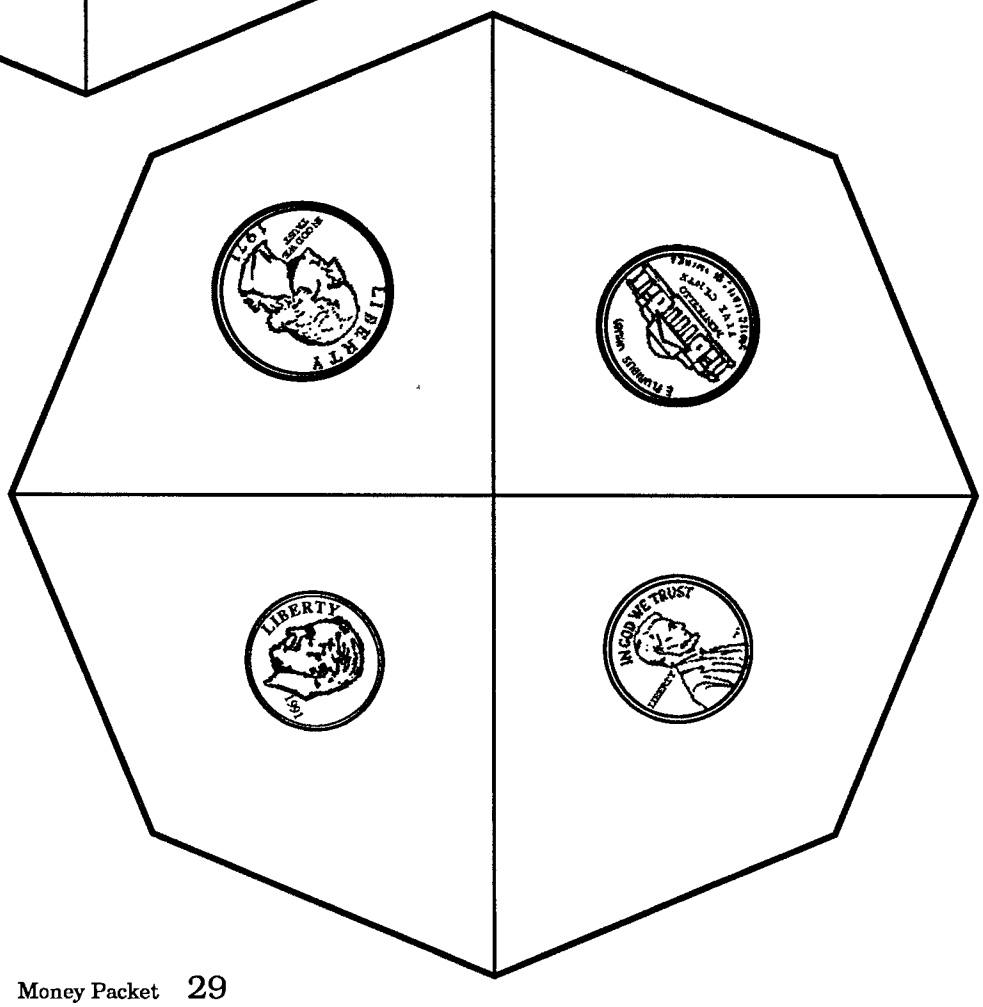


Spin Two Dollars

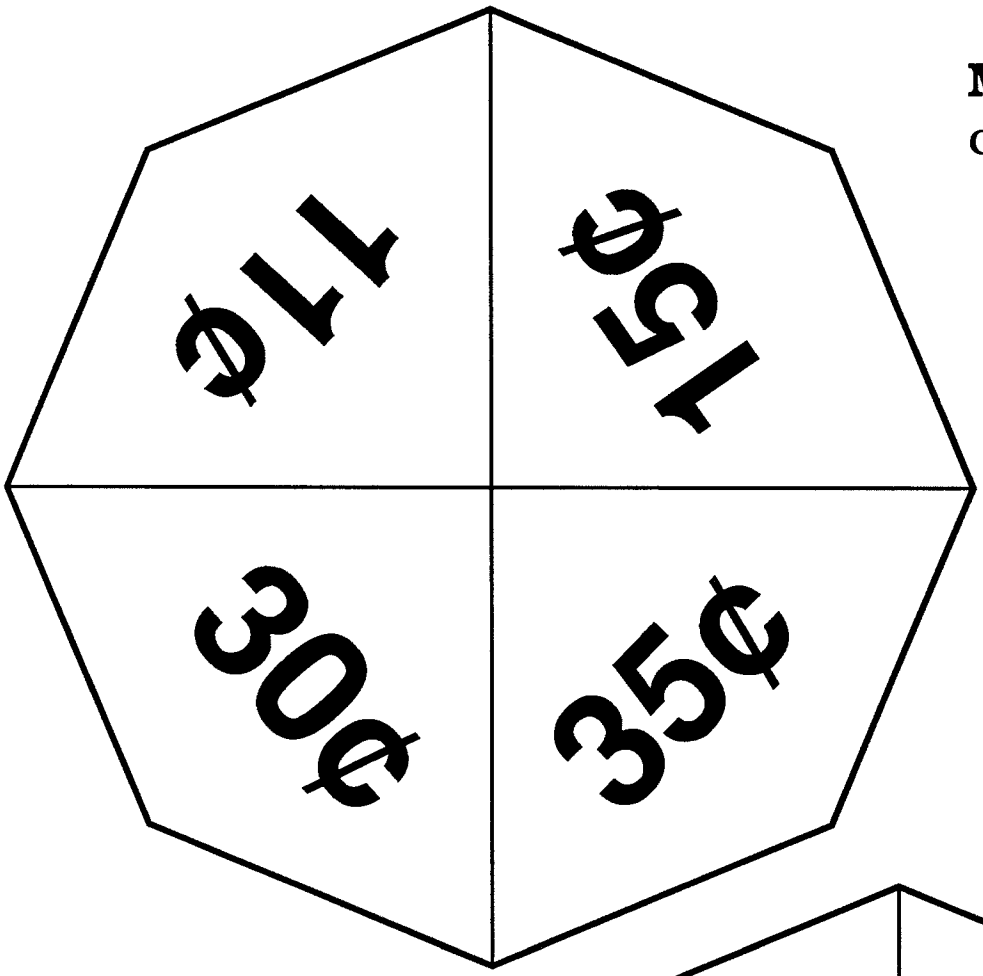


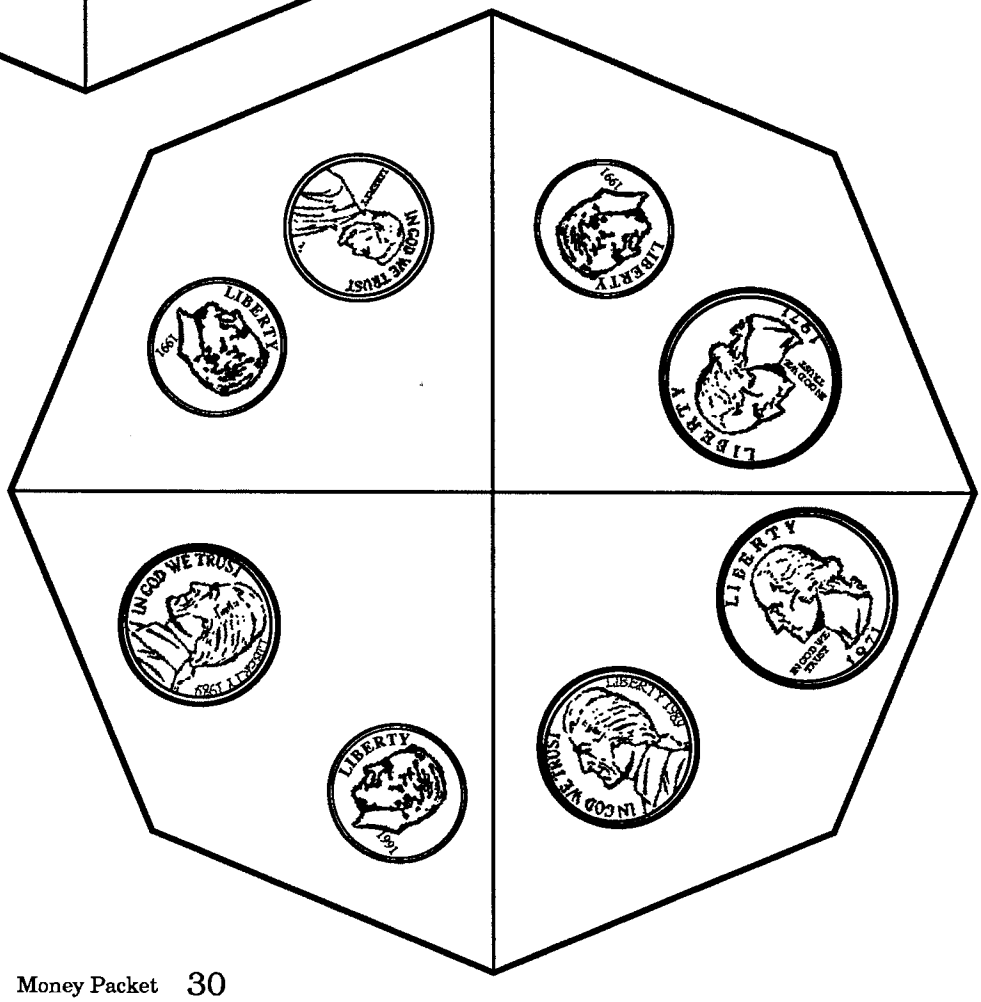
Money Sock Boxes
easy spinners



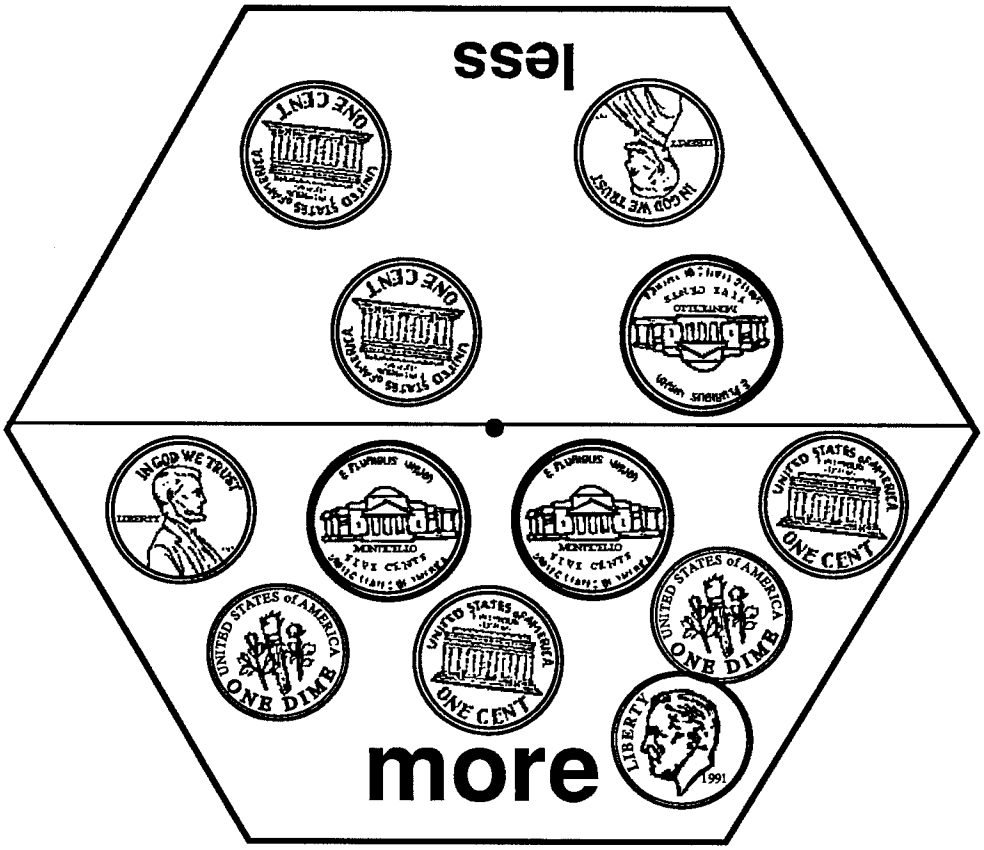


Money Sock Boxes
challenging spinners



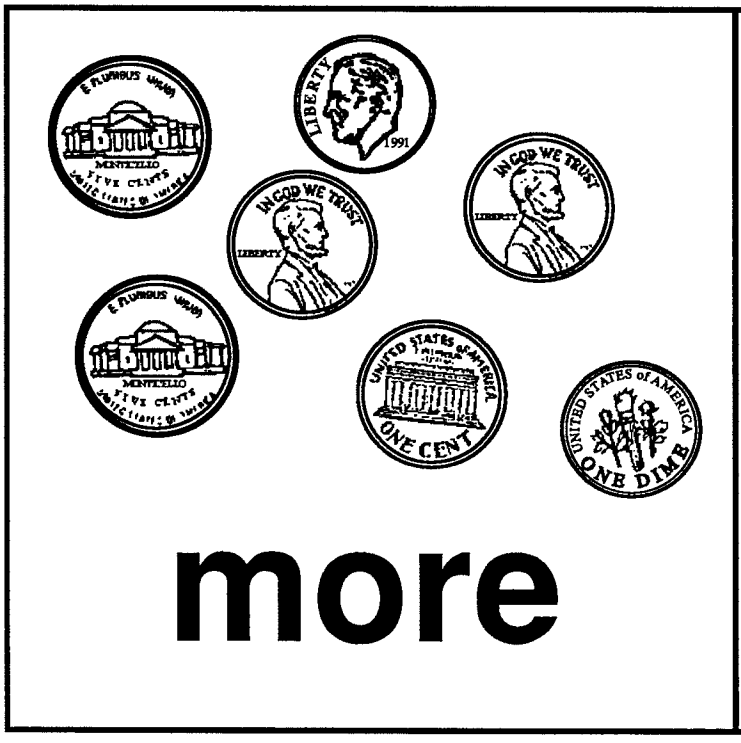


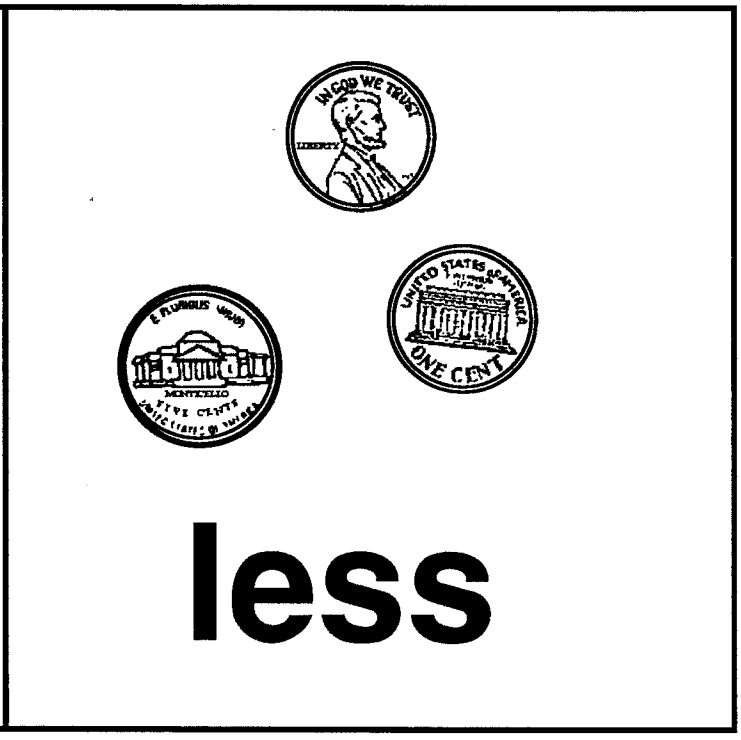
Count, Tell, Spin and Win

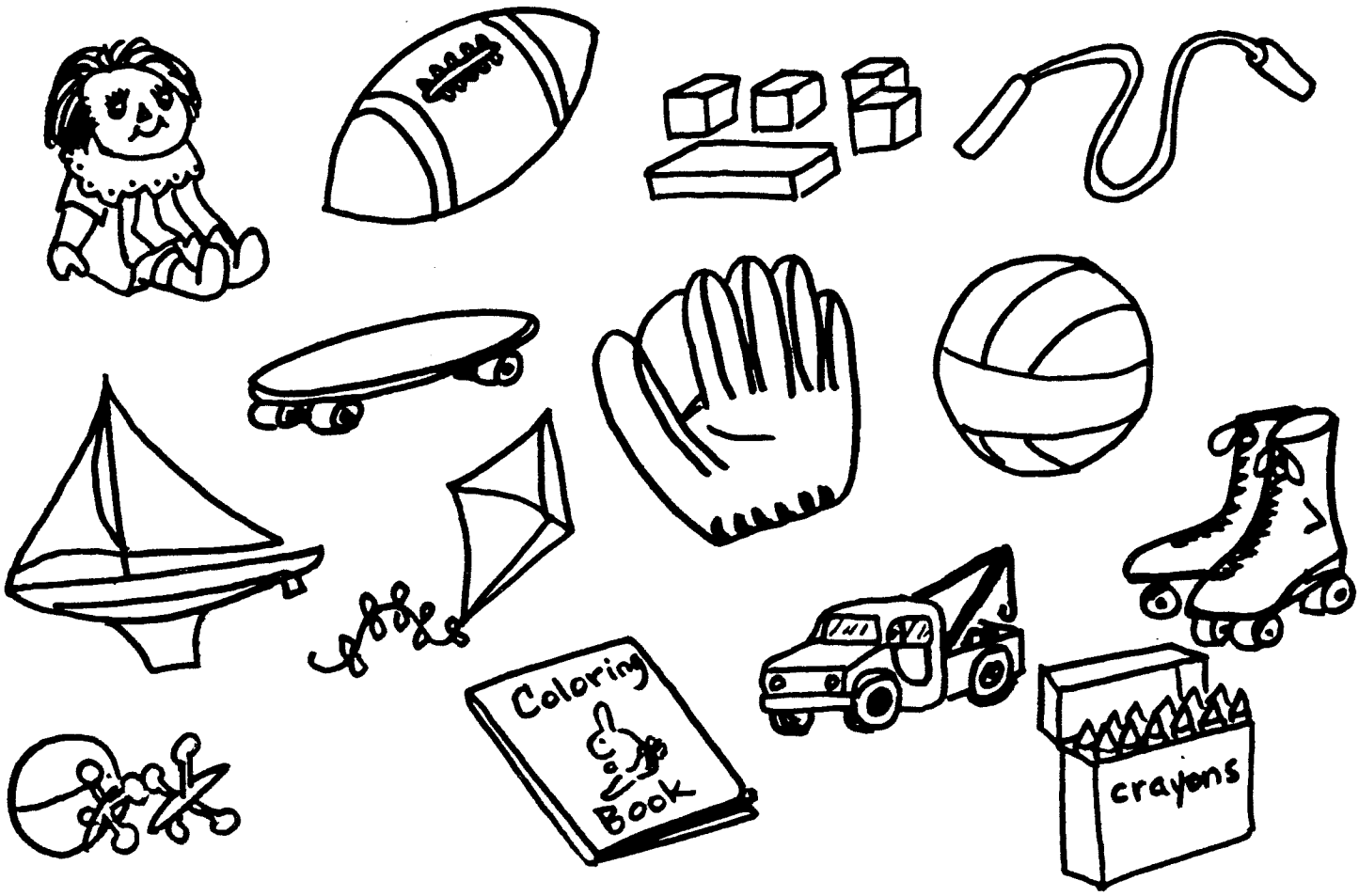


spinner top

marker cards (glue to tag)



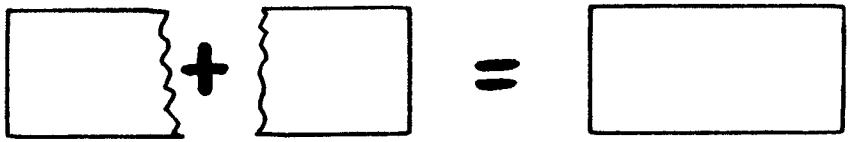


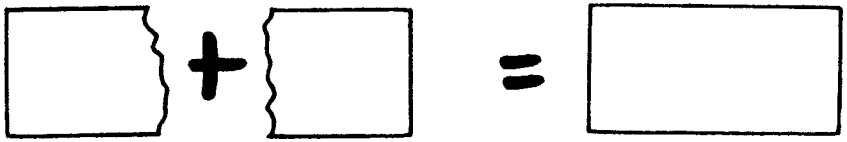


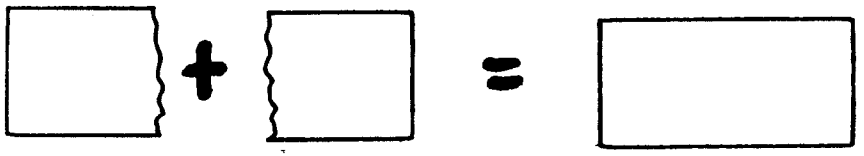
Penny Push Gameboard

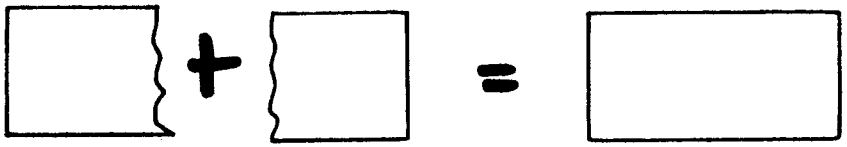
Drop the Money

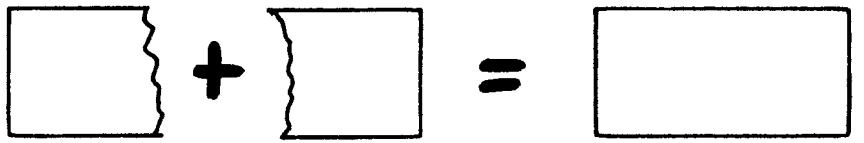
name: _____

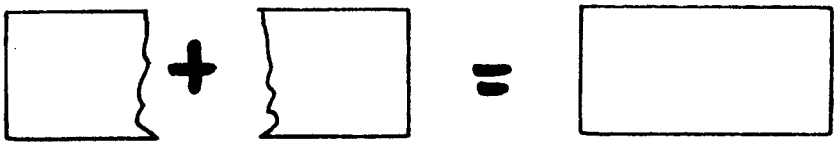


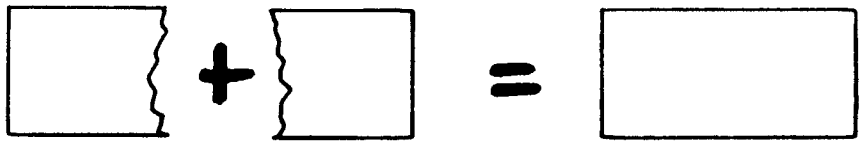






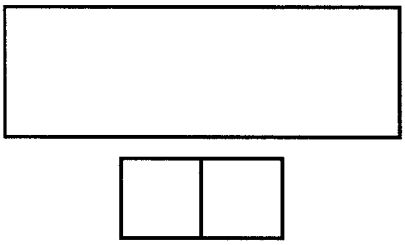


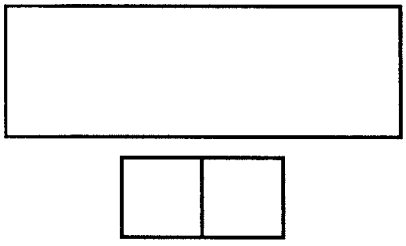


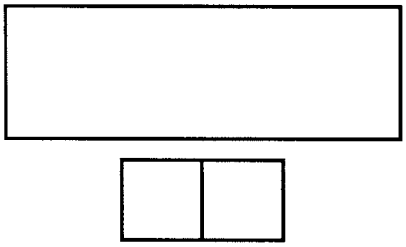


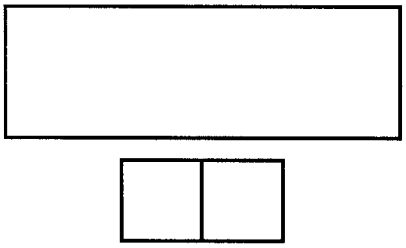
Stamp the Price

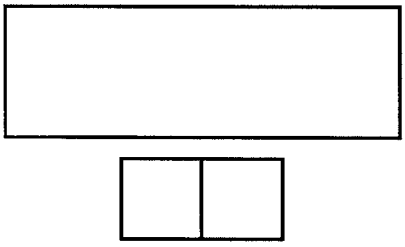
name _____











Stamp the Price Twice

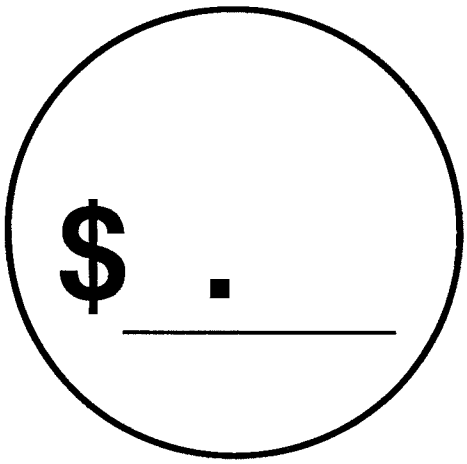
name _____

<footer>35 Money Packet</footer>

Coin Stamp Booklet

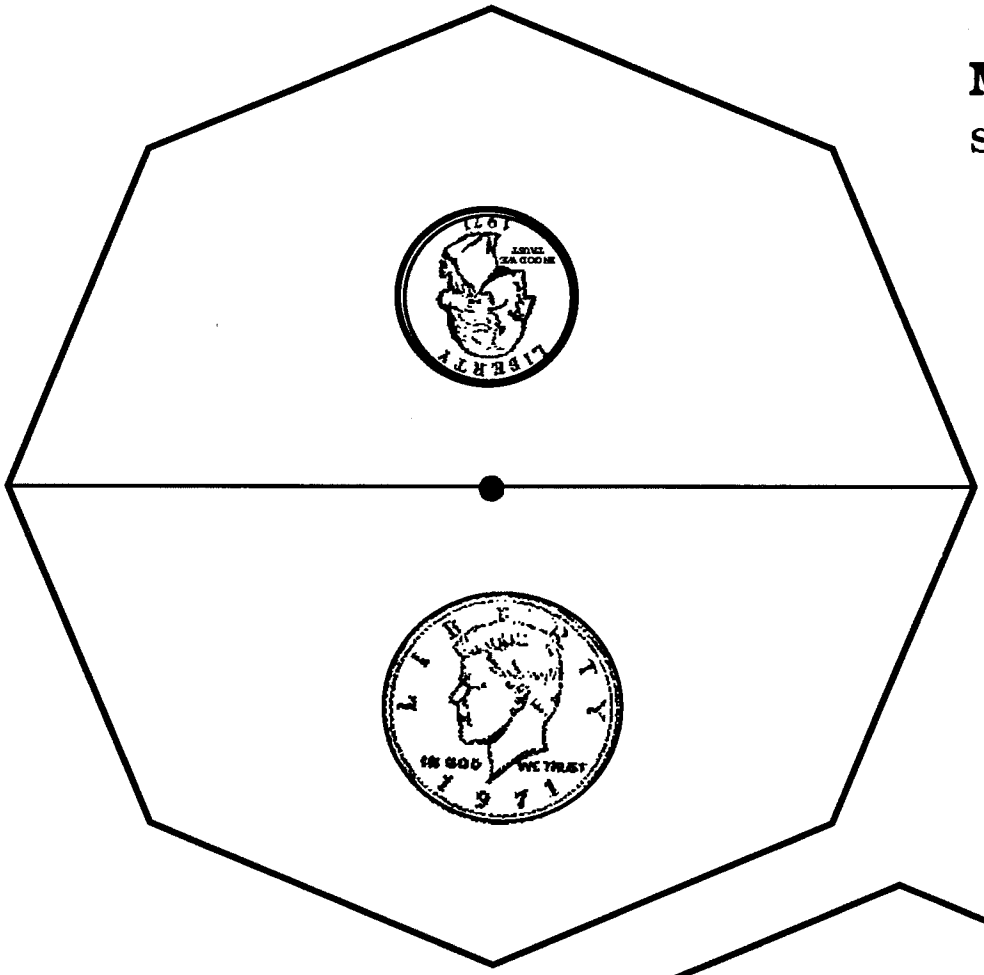
name _____

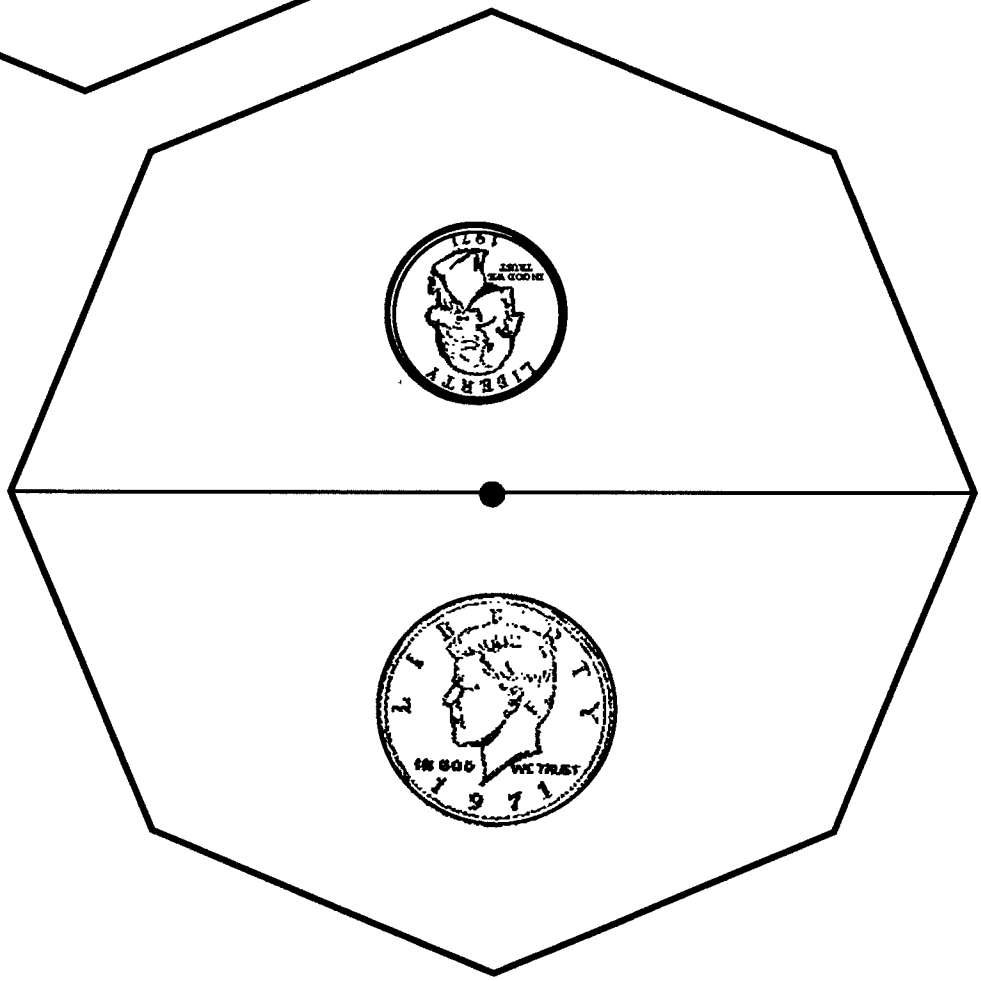
name _____



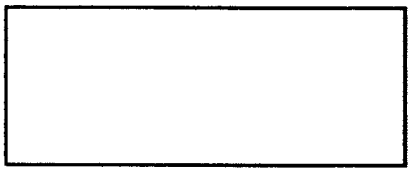
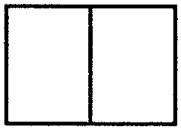
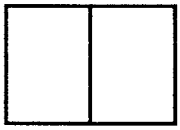
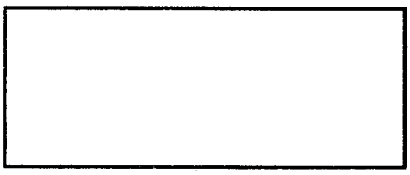
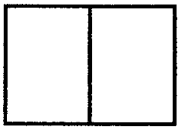
name _____

Make Change
spinner tops





Make Change

item	amount paid	change needed
 price 		
item  price 	amount paid	change needed
item  price 	amount paid	change needed
item  price 	amount paid	change needed

Money March

Roll 25 Cents—Trading Boards

nickels

pennies

nickels

pennies

nickels

pennies

nickels

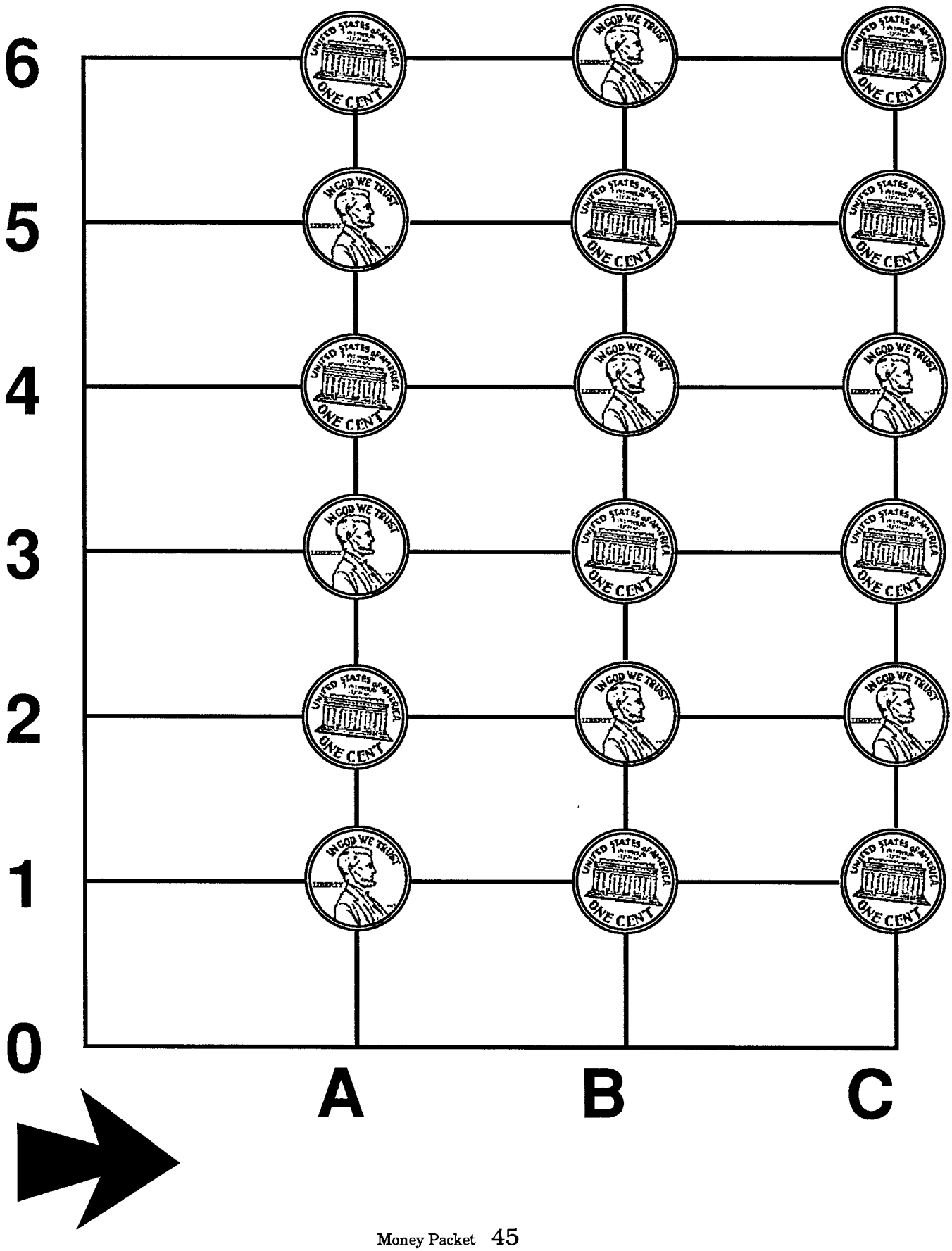
pennies

Trading Boards—Money Trading Game

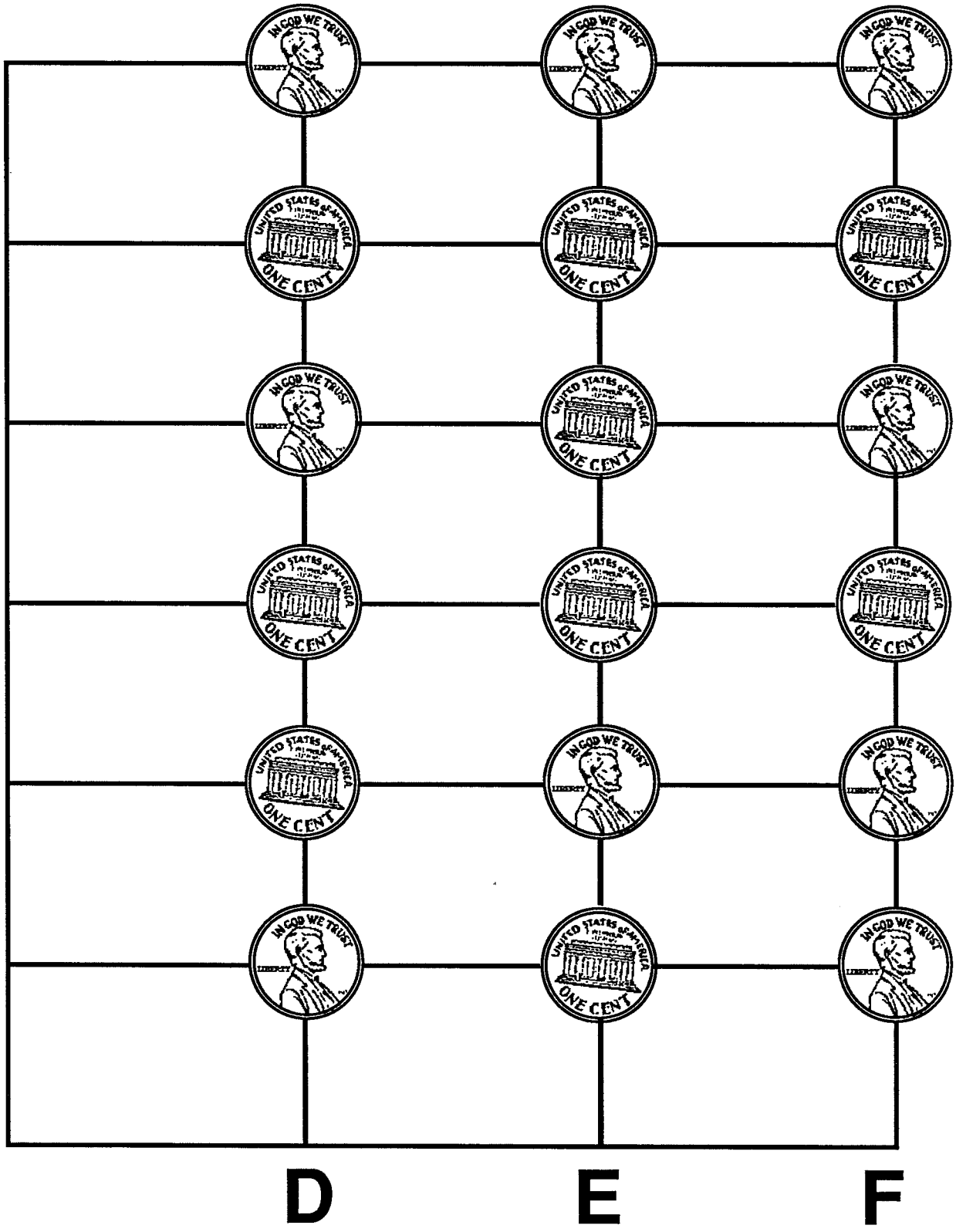
Trading Boards—Money Trading Game

Dig For Buried Treasure

easy gameboard

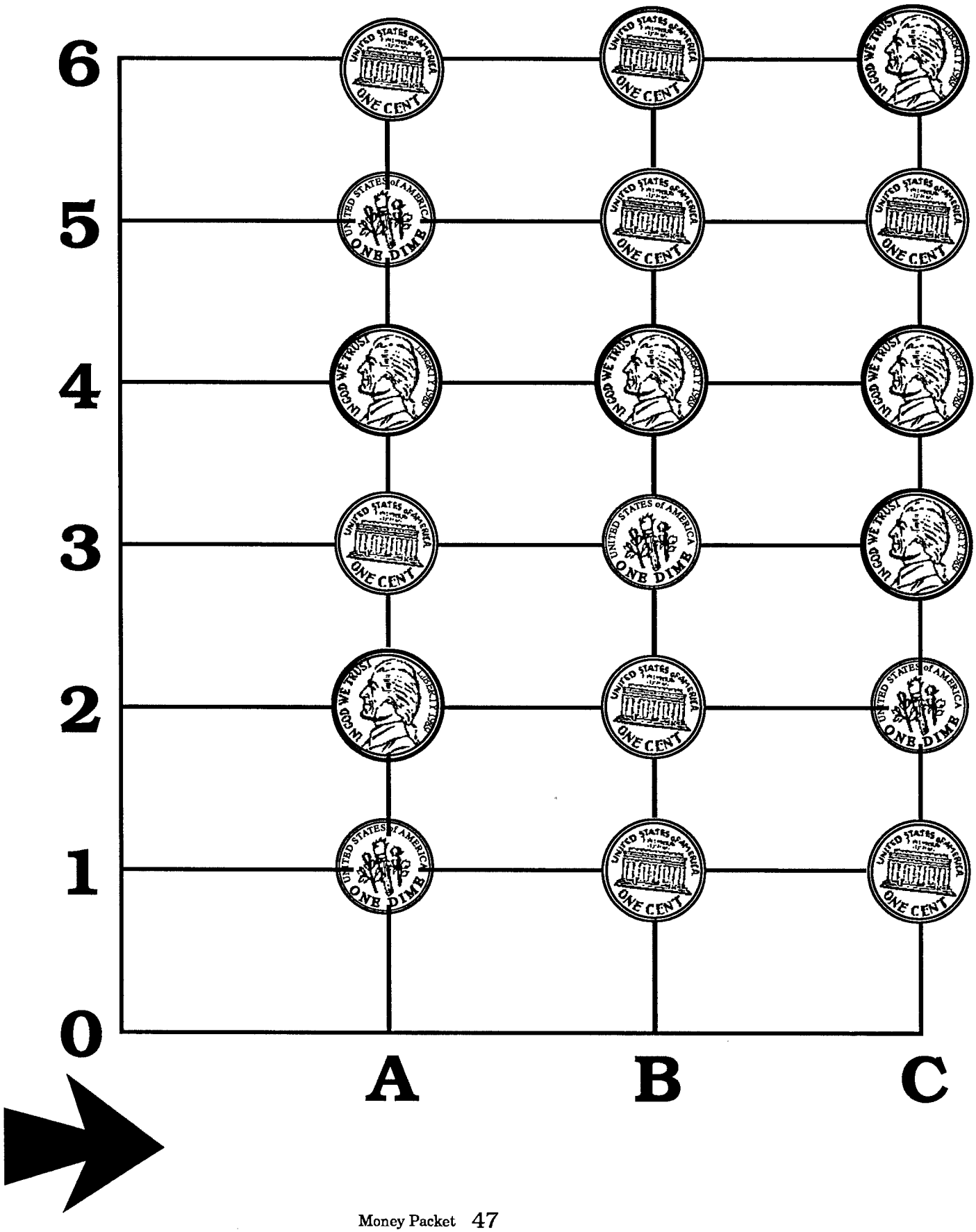


easy gameboard

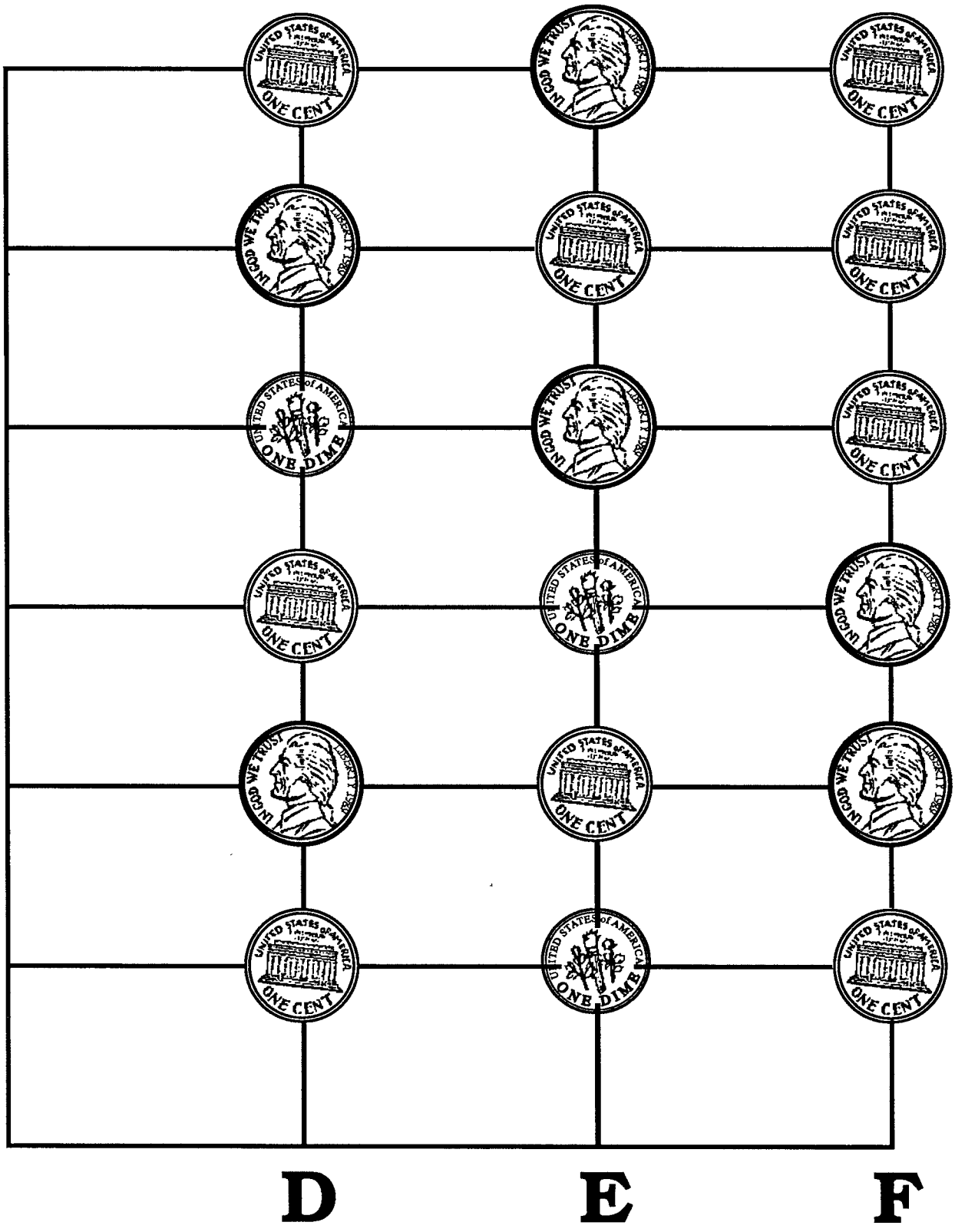


Dig For Buried Treasure

mid-level gameboard

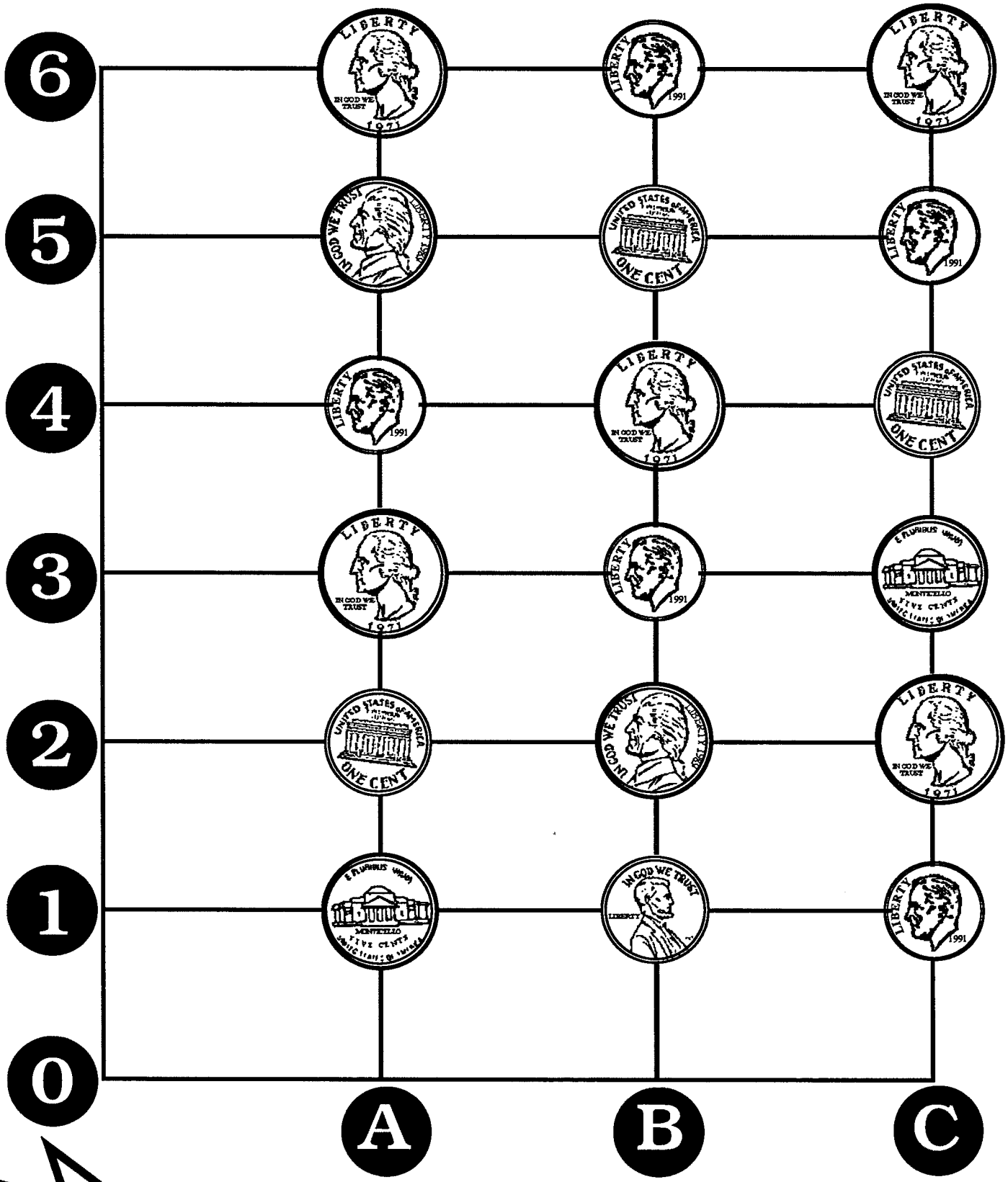


mid-level gameboard



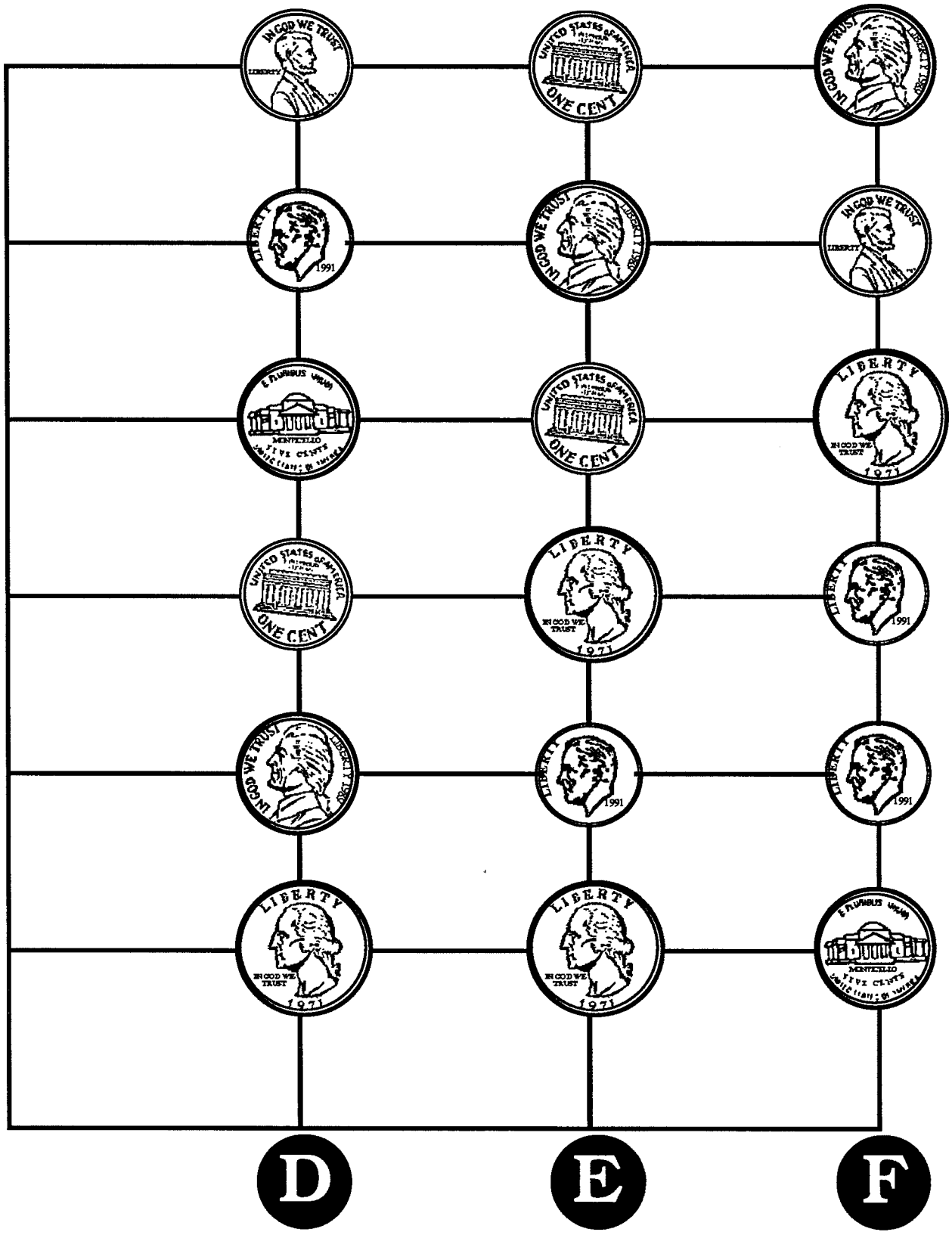
Dig For Buried Treasure

challenging gameboard



Dig for Buried Treasure

challenging gameboard



D, 1	D, 2	D, 3
D, 4	D, 5	D, 6
E, 1	E, 2	E, 3
E, 4	E, 5	E, 6
F, 1	F, 2	F, 3
F, 4	F, 5	F, 6

Dig for Buried Treasure - Game Cards

A, 1	A, 2	A, 3
A, 4	A, 5	A, 6
B, 1	B, 2	B, 3
B, 4	B, 5	B, 6
C, 1	C, 2	C, 3
C, 4	C, 5	C, 6

Easy Money Starter Cards

Penny Push

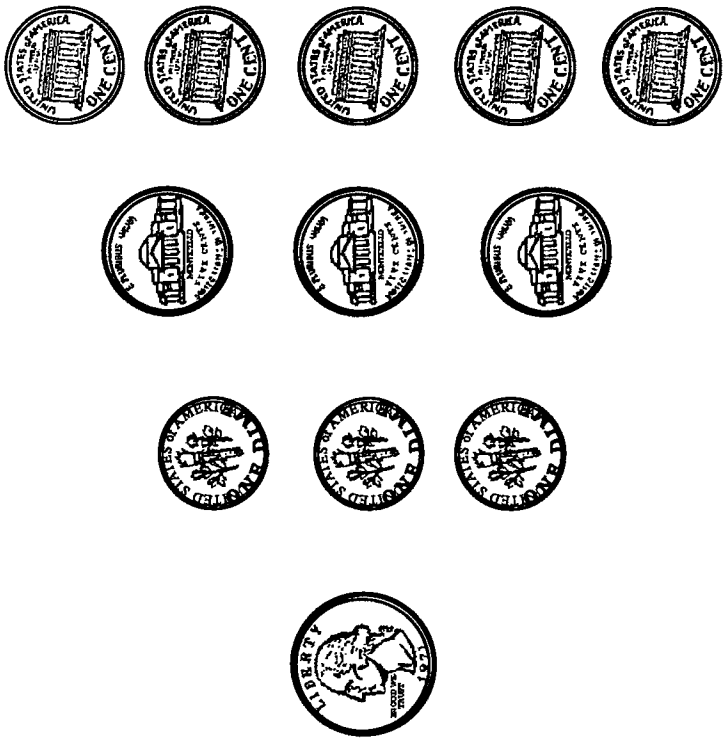
Penny Push

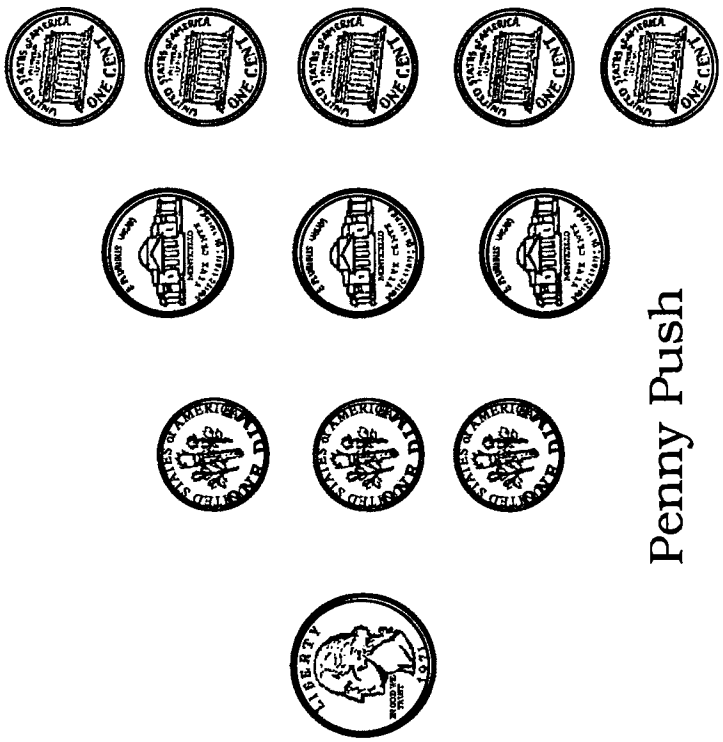
Easy Money Starter Cards

Penny Push

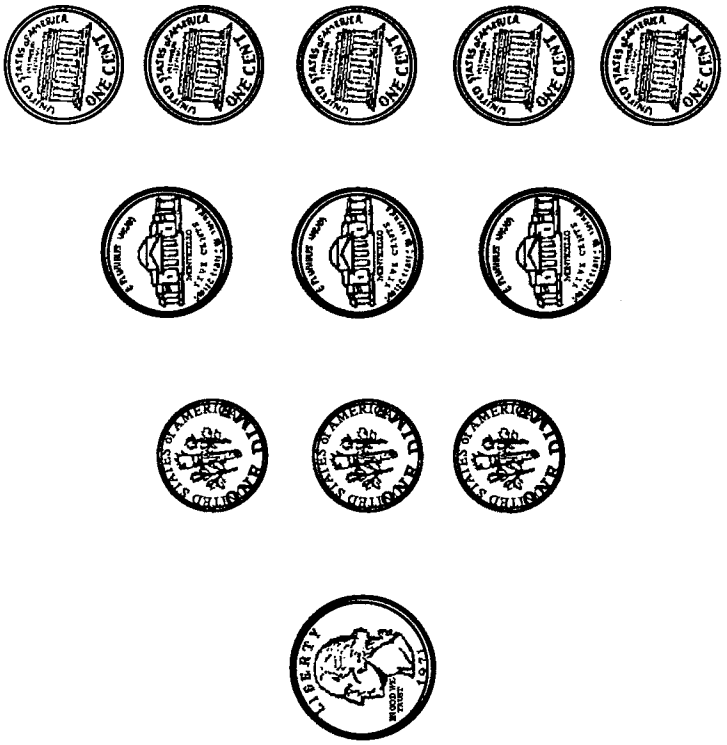
Penny Push

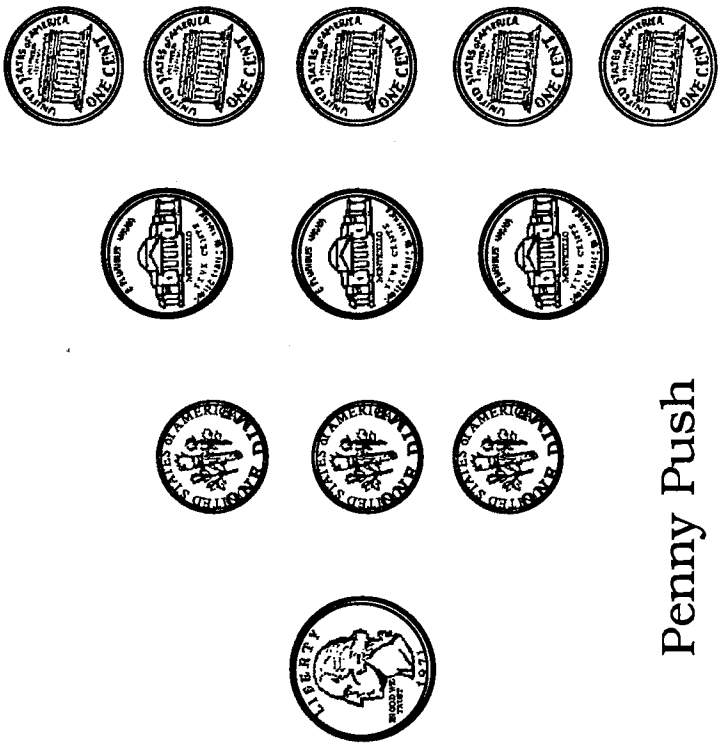
Challenging Money Starter Cards





Penny Push





Penny Push

D

Shopping Spree

A

Flat tire

Pay 8¢

Need gas

Pay 7¢

2

Go forward 2

Find 3¢

Find 5¢

Find 4¢

The End

A

Need Gas
Pay 7¢

TOLL BRIDGE
Pay 8¢

Find 10¢

Find 3¢

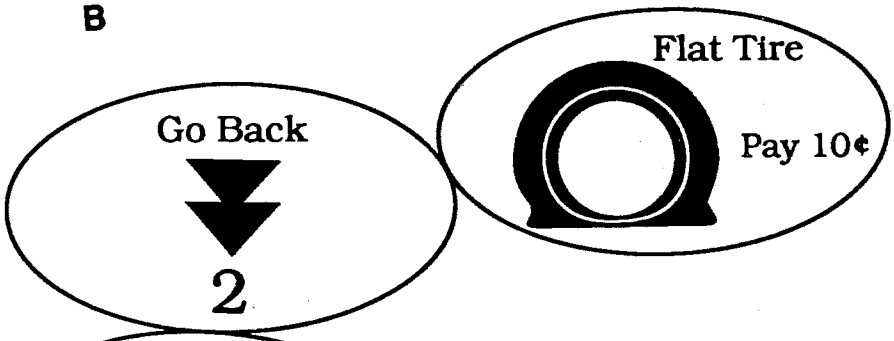
Find 5¢

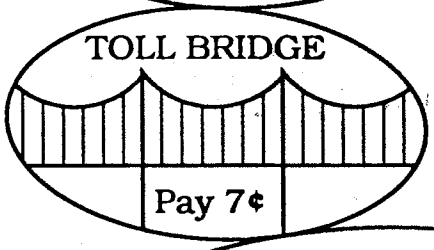
2
Go forward 2

Speeding Ticket
Pay 4¢

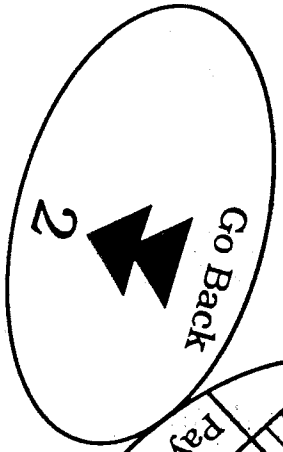
B

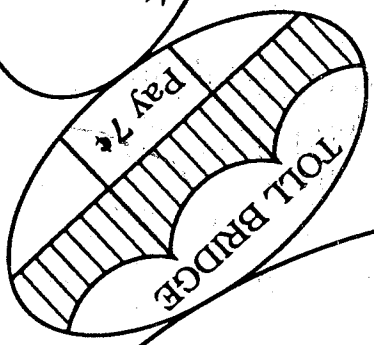
B

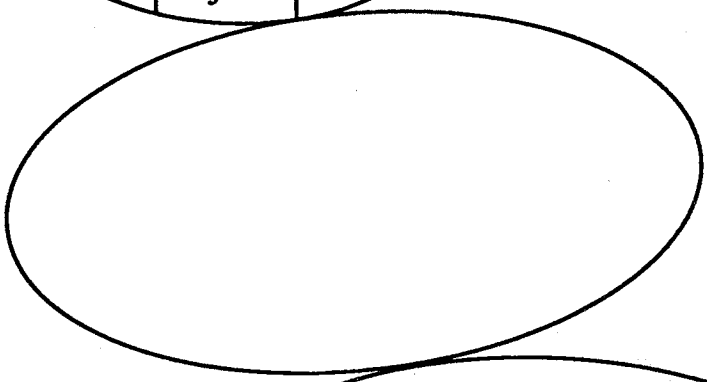

Flat Tire
Pay 10¢
Go Back
2

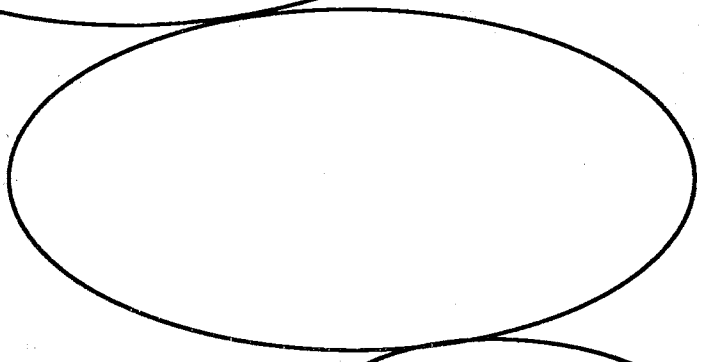

TOLL BRIDGE
Pay 7¢

C

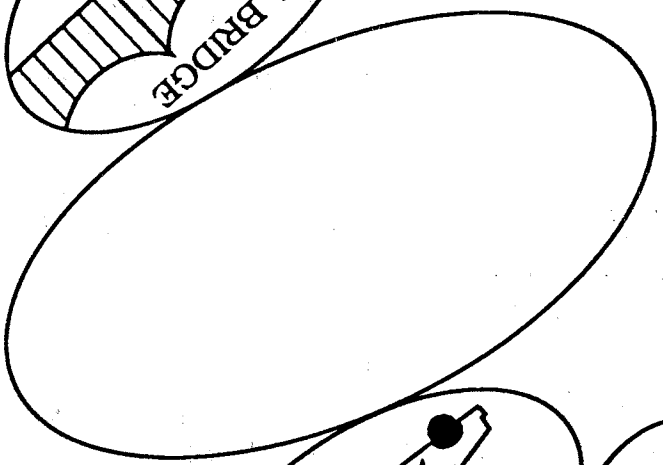

Go Back
2

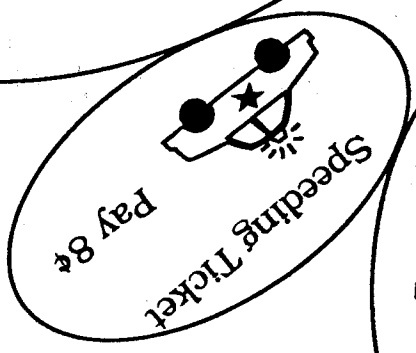

TOLL BRIDGE
Pay 7¢

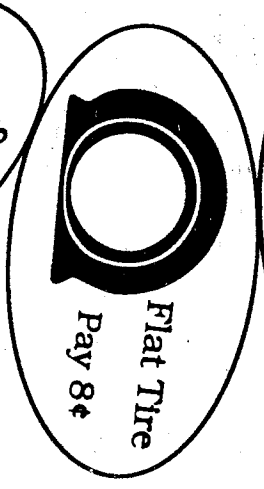


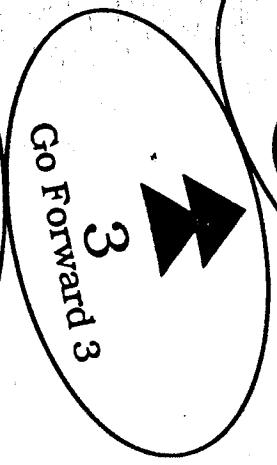


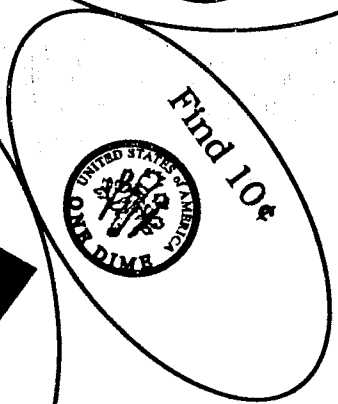

Find 5¢




Speeding Ticket
Pay 8¢


Flat Tire
Pay 8¢


3
Go Forward 3


Find 10¢

D

C

Find 7¢

Need Gas
Pay 8¢

Find
3¢

Find
4¢

Go Forward 4
4

TOLL BRIDGE
Pay 7¢

Find 6¢

Speeding Ticket
Pay 10¢

Go Back
2

Money Starter Cards-Easy

Shopping Spree

Shopping Spree

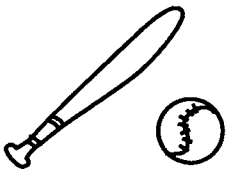
Money Starter Cards-Easy

Shopping Spree

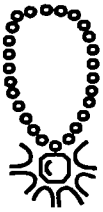
Shopping Spree

Challenging Money Starter Cards

Earn 5¢

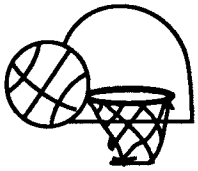


27¢



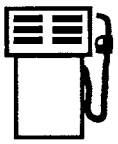
32¢

8¢



16¢

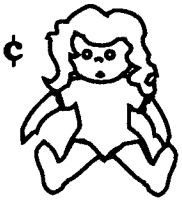
BUY

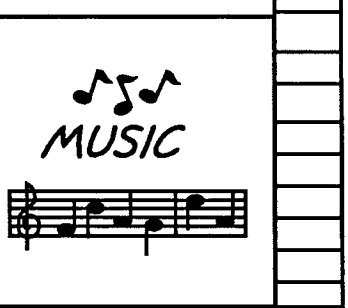


Pay 5¢

RIGHT TURN ONLY

18¢





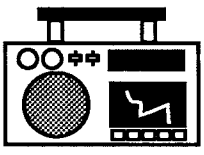
5¢

15¢

LEFT TURN ONLY

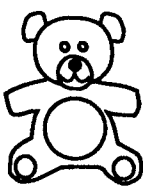
ONE WAY

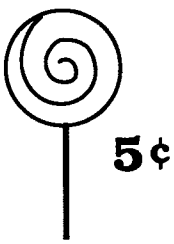
32¢



23¢

26¢

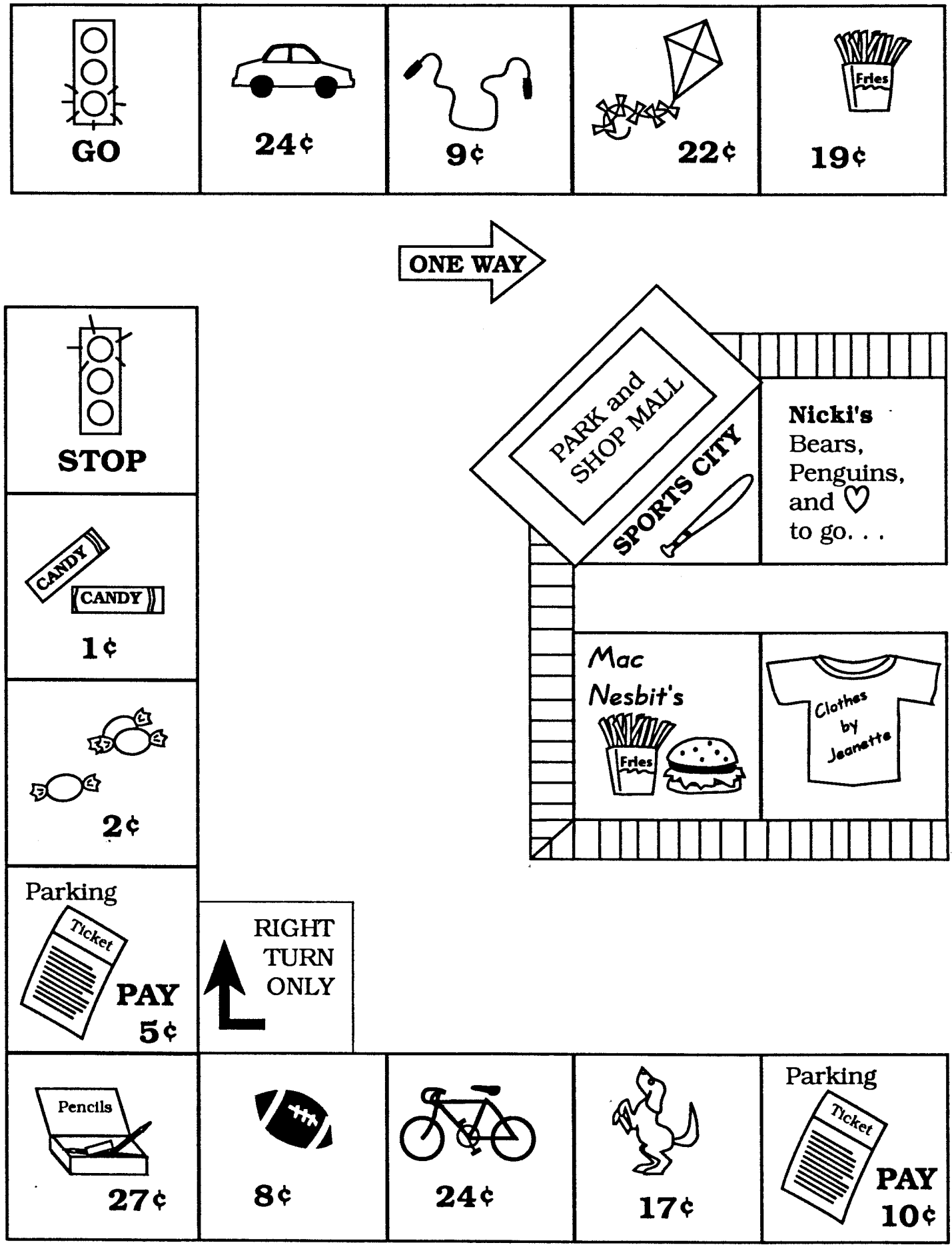




5¢

16¢

EARN 5¢


GO
24¢
9¢
22¢
Fries
19¢
ONE WAY
STOP
PARK and SHOP MALL
SPORTS CITY
Nicki's Bears, Penguins, and ♡ to go. . .
CANDY
CANDY
1¢
Mac Nesbit's
Fries
Clothes by Jeanette
2¢
Parking
Ticket
PAY 5¢
RIGHT TURN ONLY
Pencils
27¢
8¢
24¢
17¢
Parking
Ticket
PAY 10¢

Challenging Money Starter Cards

Apply the appropriate labels on both ends of each box lid. Either run the labels on full-sheet Avery Labels No. 5165, cut apart and attach; or simply cut apart these pages and glue or tape on.

Coin Graphs

A PRACTICE & ENRICHMENT BOX

Money March

A PRACTICE & ENRICHMENT BOX

Spin a Half Dollar

A PRACTICE & ENRICHMENT BOX

Spin Two Dollars

A PRACTICE & ENRICHMENT BOX

Roll Twenty-Five Cents

A PRACTICE & ENRICHMENT BOX

Money Trading Game

A PRACTICE & ENRICHMENT BOX

Money Socks Boxes

A PRACTICE & ENRICHMENT BOX

Money Puzzles

A PRACTICE & ENRICHMENT BOX

Count, Tell, Spin and Win

A PRACTICE & ENRICHMENT BOX

Earn a Nickel

A PRACTICE & ENRICHMENT BOX

Earn a Dime

A PRACTICE & ENRICHMENT BOX

Top Draw

A PRACTICE & ENRICHMENT BOX

Dig for Buried Treasure

A PRACTICE & ENRICHMENT BOX

Penny Push

A PRACTICE & ENRICHMENT BOX

Coin Graphs

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Money March

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Spin a Half Dollar

A PRACTICE & ENRICHMENT BOX

Spin Two Dollars

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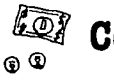
Money Puzzles

A PRACTICE & ENRICHMENT BOX



Count, Tell, Spin and Win

A PRACTICE & ENRICHMENT BOX

Earn a Nickel

A PRACTICE & ENRICHMENT BOX

Earn a Dime

A PRACTICE & ENRICHMENT BOX

Top Draw

A PRACTICE & ENRICHMENT BOX

Dig for Buried Treasure

A PRACTICE & ENRICHMENT BOX

Penny Push

A PRACTICE & ENRICHMENT BOX

Shopping Spree

A PRACTICE & ENRICHMENT BOX

Drop the Money

A PRACTICE & ENRICHMENT BOX

Stamp the Price

A PRACTICE & ENRICHMENT BOX

Stamp the Price Twice

A PRACTICE & ENRICHMENT BOX

Coin Stamp Booklets

A PRACTICE & ENRICHMENT BOX

Shop the Ads

A PRACTICE & ENRICHMENT BOX

Park and Shop

A PRACTICE & ENRICHMENT BOX

Make Change

A PRACTICE & ENRICHMENT BOX

Shopping Spree

A PRACTICE & ENRICHMENT BOX

Drop the Money

A PRACTICE & ENRICHMENT BOX

Stamp the Price

A PRACTICE & ENRICHMENT BOX

Stamp the Price Twice

A PRACTICE & ENRICHMENT BOX

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Park and Shop

A PRACTICE & ENRICHMENT BOX

Make Change

A PRACTICE & ENRICHMENT BOX

Place Value
counting

BOX IT OR BAG IT MATHEMATICS

Practice & Enrichment Boxes

Donna Burk • Allyn Snider
Paula Symonds

Published by The Math Learning Center

Box It or Bag It Mathematics, Practice & Enrichment Box:
Place Value Counting

Box It or Bag It Mathematics consists of:
- Teachers Resource Guide and Blackline Masters, Kindergarten
- Teachers Resource Guide and Blackline Masters, 1st and 2nd Grade
- Practice & Enrichment Boxes:
  - Shapes
  - Introduction to Measuring
  - Understanding Measuring
  - Reading, Writing & Understanding Numerals 0–10
  - Pattern
  - Arithmetic
  - Money
  - Place Value Counting
  - Place Value Addition & Subtraction

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Place Value Counting

Place Value Counting Activites

Trading Games

Working with Larger Numbers

Getting Started

Once you've introduced Place Value through a variety of group lessons, (be sure to see Box It or Bag It Mathematics Teachers Resource Guide, *PLACE VALUE COUNTING), you will want children to practice and extend their understanding using the activities in this packet. Here are a few things we've found helpful for a successful Independent Practice Time.*

Provide no more than 8–12 boxed activities at one time for a class of 30. Too many activities create more than tolerable chaos. Each Box is designed to be used by 1–4 children.

Model each activity thoroughly until children can tell you what to do, step by step. You'll find "box ingredients" and "playing instructions" for each activity in this packet. We use clear Contact paper to put them in our box lids so WE can remember what goes in each Box and how each game is played! Reading the directions would be too difficult for most primary children.

Resist the temptation to put out all your challenging Boxes at once—provide a balance of easy and hard. (If you set out too many difficult Boxes, all the children will need you at once and the noise level will be almost unbearable as your children try to cope with the stress of too many difficult tasks.)

As you construct these Practice and Enrichment Boxes, cover your box tops with the same design Contact paper. That way, you'll be able to pull your Place Value Counting Boxes off the shelf easily, even if they've gotten mixed in with other boxes. (Boxes can be ordered from The Math Learning Center in four sizes: standard (9 X 12 X 2), half size (9 X 6 X 1-7/8), junk (4 X 7 X 1-1/8), and mini (3-1/2 X 4 X 1-1/8). See the Box It or Bag It Mathematics Teachers Resource Guide, *MATERIALS INDEX, for additional ordering and making information.*

Remember the Boxes themselves can be used for group instruction. They are ideal for use by an aide or parent with small groups. Some of them can be easily adapted for use with your whole group.

During Independent Practice Time, it's critical that you be available *and* in circulation *to make sure things go smoothly. Once routines even out, you'll have opportunities to observe individuals which are not afforded when you conduct group instruction. You can spot children with problems and see children with understandings beyond your predictions. See the next page for some observation guidelines.*

Be sure to see the Box It or Bag It Mathematics Teachers Resource Guide, *INTRODUCTION, for more implementation strategies.*

Place Value Counting Assessments

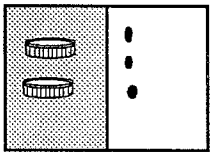
Circulating among your students as they work on the Base Ten Project Strips and the Independent Practice Boxes gives a good picture of what the children know. Here are some assessments to use in addition to the observation and questioning you do each day. The first five are individual; the last one can be done with your entire group. We usually assess after most of our children have finished the Base Ten Project. This helps target certain children for extra help as they use the Place Value Counting Boxes.

You may also choose to use the first two assessments in the fall with second graders, bearing in mind that even if most of them pass, you'll still need to devote a fair amount of time to place value counting. Their understanding of tens and ones is often fragile coming out of first grade; their understanding of hundreds, tens, and ones even more tenuous.

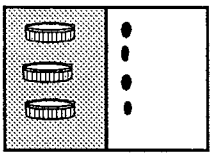
Counting by Tens
Ask the child to count to 100 by tens; to 200 by tens.

Counting a Set of Objects by Tens and Ones
Give the child a set of twenty-four buttons or beans. Ask her to put the collection in groups of ten. When she is finished arranging the objects, ask her to count them. You're looking for a counting strategy such as "Ten, twenty, twenty-one, twenty-two, twenty-three, twenty-four" or "Ten, twenty, twenty-four," rather than "One, two, three, four, five, ..." If the child starts counting by ones, stop her and ask if she knows a faster way to count the objects.

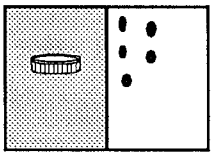
Reading a Model for Hundreds, Tens, and Ones
Before the activity, prepare some cups of ten beans and envelopes of one hundred. Lay out various combinations of tens and ones on a place value board and ask the child to quickly tell you how many beans there are each time.



Child: *Ten, twenty, twenty-one, twenty-two, twenty-three.*



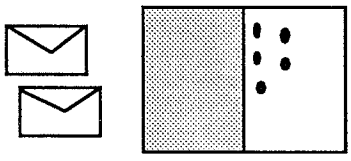
Child: *Thirty-four.*



Child: *Ten, eleven, twelve, thirteen, fourteen, fifteen.*

Be sure to include several teen numbers. This is often a point of confusion for children.

If a child is able to read tens and ones with ease, you may wish to check her on hundreds, tens, and ones. Use the same procedure out-lined above, using sealed envelopes of 100 for the hundreds.



Child: *Two hundred five.*

Be sure to include numbers with ones and zeros in the tens and ones places, such as 413, 203, 120, 381. These are a frequent source of confusion.

Building a Model for Hundreds, Tens, and Ones
Same procedure as above, except the child builds various numbers as you say them or hold them up on a card.

Teacher: *Build 25.*
Teacher: *I'm going to hold up a card with the number I want you to build. Ready?*

Reading Numbers:
Check the child to make sure he can read a variety of numbers, first 2-digit, then 3-digit. An assortment might include:

13	31	40	87	15
137	249	450	306	213
609	710	530		

Writing Numbers From Dictation
Ask child to write various numbers from dictation, first 2-digit, then 3-digit, if you wish. An assortment might include numbers like the ones above.

Place Value Counting Observation and Assessment Sheet

														Children's Names
														Child is able to share materials and work cooperatively.
														Child is able to rote count by tens to _____.
														Child is able to count a set of objects by tens and ones.
														Child tries estimating quantities.
														Child is able to establish and maintain order in their work.
														Child is able to compare quantities.
														Child is able to record data accurately.
														Child is able to "read" a model for tens and ones; for hundreds, tens and ones.
														Child is able to "build" a model for tens and ones; for hundreds, tens and ones.
														Child is able to read 2- and 3-digit numbers.
														Child is able to read 2- and 3-digit numbers.

Place Value Counting Activities

See *Box It or Bag It Mathematics Teachers Resource Guide,* PLACE VALUE COUNTING, "Guess and Check" and "Counting Jars," for group introductions to these Boxes.

COUNTING JARS (1–4 Children)

Box ingredients→ 10–15 counting jars record sheets

standard box for storage

Keep margarine tubs and portion cups available on your general math materials shelf.

PLAYING INSTRUCTIONS

1. Pick a jar and write down its name on record sheet.
2. Guess how many objects and record.
3. Dump it out and count the objects into tens and ones. Get portion cups and margarine tubs from the general materials shelf if you need them to hold your groups of ten.
4. Record the amount.
5. Continue working until page is filled. Cut apart the sections to make a book, if you wish.

MAKING INSTRUCTIONS

Counting Jars

1. Gather at least ten tiny jars with lids. Your housemates will forgive you for all the olives, capers, sauces, gourmet jellies, etc., you feed them. Don't forget that your class is a great source for such things. Send a note!
2. Fill each jar with 15–100 or more counters. Here are some possibilities: colored macaroni (use a bit of rubbing alcohol and food coloring to dye), lima beans (even more fun when spray-painted a bright, glossy color), shells, plastic cake decorations, keys, plastic fruits, macrame beads, buttons, nuts and bolts, etc.

3. Label each jar with the name of the items.

Record Sheets

Locate Counting Jars record sheet in the blacklines. Run copies and store in standard box along with counting jars. NOTE: If your jars are heavy, search out a very sturdy box.

Portion Cups

You can purchase 1-ounce shallow paper souffle cups in boxes of 250 from MLC Materials, or a local restaurant supply store. One or two boxes ought to be adequate for all the activities in this packet.

FILL AND COUNT (1–4 Children)

Box ingredients→ many small jars of various shapes, each labeled with an alphabet letter

beans (spray-painted lima beans are wonderful but any kind is OK)

scoops (to fill jars) record sheets

standard box for storage

Keep margarine tubs and portion cups available on your general math materials shelf.

PLAYING INSTRUCTIONS

1. Pick a jar and fill it with beans.
2. Dump it out and count the beans, using portion cups to group the tens. Regroup tens into hundreds in margarine tubs when necessary.
3. Record the amount.
4. Continue working until page is filled.

MAKING INSTRUCTIONS

Record Sheets
Locate Fill and Count record sheet in the blacklines. Run copies and store in standard box along with jars and beans.

JUNK BOX COUNTING (1–4 Children)

Activity ingredients→ junk boxes record sheets

one Duo-Tang folder with pockets at the bottom for storage

Keep margarine tubs and portion cups available on your general math materials shelf.

PLAYING INSTRUCTIONS

1. Choose a junk box and write its name on the record sheet.
2. Study its contents carefully and guess how many. Record your guess.
3. Count out the items into ones, tens, and hundreds, making all needed regroupings. (Get portion cups and margarine tubs from the general materials shelf to group your tens and hundreds if you need them.)
4. Record your findings.
5. Continue working until the paper is finished.

MAKING INSTRUCTIONS

Record Sheets
Locate Junk Box Counting record sheet in blacklines. Run copies and store in Duo-Tang folder covered with the same Contact paper you use on Place Value Boxes. Label the folder. Keep junk boxes on your general math materials shelf and have children get them as needed.

GENERAL MATERIALS COUNTING

Activity ingredients→ your classroom collection of pattern blocks, plain wooden cubes, unifix cubes, and tiles

record sheets

one Duo-Tang folder with pockets at the bottom for storage

Keep margarine tubs and baskets available on your general math materials shelf.

PLAYING INSTRUCTIONS

1. Choose a tub of general materials.
2. Study its contents and guess how many.
3. Record your guess.
4. Count out the items and record your amount. (Get margarine tubs and larger tubs or baskets from the general math materials shelf to hold your tens and hundreds if you need them.)
5. Continue working until record sheet is finished.

NOTE: Our children love to count everything in the room; however, they may not want to do all the things on the record sheet. We suggest they share responsibilities and turn in a record sheet as a group rather than individually. It's also fine to only do part of a sheet!

MAKING INSTRUCTIONS

Record Sheets

Locate General Materials Counting record sheet in blacklines. Run copies and store in Duo-Tang folder covered with the same Contact paper you use on Place Value Boxes. Label the folder. Keep pattern blocks, plain wooden cubes, unifix cubes and tiles on your general math materials shelf and have children get them as needed.

GIFT WRAP COUNTING (1–4 Children)

Box ingredients→ gift wrap cards record sheets

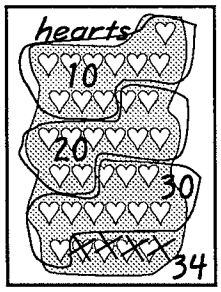
Vis-a-vis or overhead projector pens

standard box for storage

provide slightly dampened cloths or paper towels for cleanup

PLAYING INSTRUCTIONS

1. Estimate how many items are on your gift wrap card. Record your estimate.
2. Use pen to count off groups of ten and loop them. When no more tens can be looped, "X" the ones. Write the numbers.
3. Record the total on your record sheet.
4. Use pen to count off groups of ten and loop them. When no more tens can be looped, "X" the ones. Write the numbers.

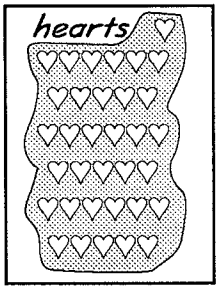


5. Record the total on your record sheet.
6. Continue until your paper is filled. Cut your page apart and staple it into a small booklet, if you wish.

MAKING INSTRUCTIONS

Gift Wrap Cards

1. Gather a variety of gift wraps with countable designs.
2. Mount pieces of wrap on 8-1/2 X 11 tag cards. (Some teachers like to "free form" the edges of their wrap a bit—eliminating the half and quarter items.) Label each card with the item's name.



3. Laminate.

Record Sheets

Locate Gift Wrap Counting record sheet in blacklines. Run copies and store in a standard box along with Gift Wrap cards and pens.

SPIN, COUNT, AND MAKE A BOOK (1–4 Children)

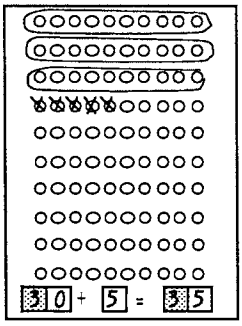
Activity ingredients→ double spinner record sheets

colored construction paper for book covers

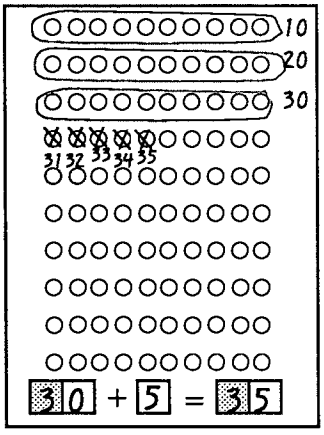
taped folder for storage

PLAYING INSTRUCTIONS

1. Spin both sides of the double spinner and carefully record number on chosen paper.
2. Loop the tens and "X" the ones for the number you spun.



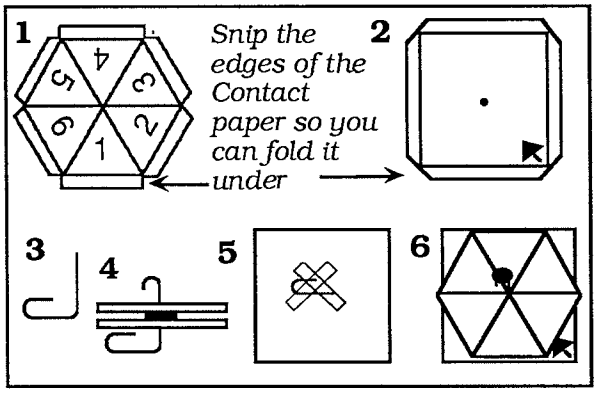
NOTE: It is very nice to write your counting patterns after you've looped your tens and marked your ones.

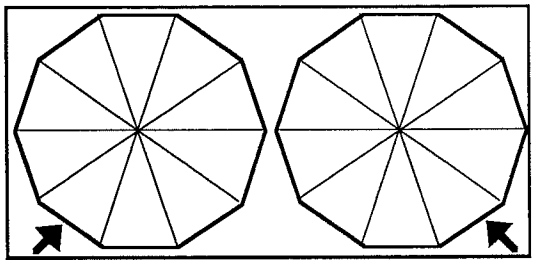


MAKING INSTRUCTIONS

Double Spinner

1. Locate spinner tops in blacklines. Glue tops to poster or matte board. Cut around glued spinner tops and cover the top sides with clear Contact paper, overlapping edges to the underside. Use a school compass to poke a hole in the center of each spinner top.
2. Cut a base from poster or matte board that will hold spinner tops and still fit into your game box. Cover with clear Contact paper. Set spinner tops on base to determine placement. Mark the center of each top on base. Poke a hole in base with your compass for each of your spinner tops.
3. Get #1 paper clips, one for each spinner top, straighten one side as shown in diagram.
4. Cut a 1"-square washer from poster or matte board for each spinner. Use a compass to poke a hole in the center. Assemble spinner top, washer, and base on paper clip as shown. Bend opened clip over.
5. Tape clip on underside of base.
6. Tape top part of paper clip for safety. Use a permanent pen to draw arrows on base.





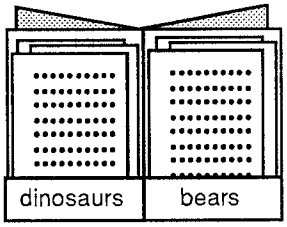
Record Sheets

Locate Spin, Count, and Make a Book record sheets in blacklines. Run copies of each.

Book Covers

Cut colored newsprint or construction paper 8-1/2 X 11 for book covers. (Our children have loved using a front and back cover and writing their own book title. They often have very unusual ways of stapling it together!) Store paper for book covers, along with record sheets, in taped folder described below.

Taped Folder



Purchase four Duo-Tang folders (same color) with pockets at bottom. Tape together with filament tape at back and edges. Cover folder with the same Contact paper as your Place Value Boxes and label.

Trading Games

See *Box It or Bag It Mathematics Teachers Resource Guide,* PLACE VALUE COUNTING, To 50 and Back, for group introduction to these Boxes.

BEACHCOMBER TRADING (Forward Trading Game—2 Children)

Box ingredients→ shells in minibox; one die, 4–9; two gameboards; 20 "sandbuckets"; half box for storage

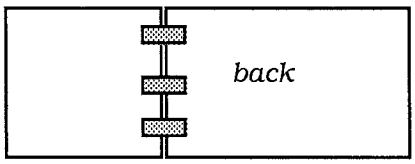
PLAYING INSTRUCTIONS

Take turns:
1. Roll the die.
2. Take the number of shells indicated.
3. Place them on the "wave" side of your gameboard.
4. Each time you get ten shells, put them in a sandbucket and move the bucket to the "beach" side of your gameboard.
5. The first player to get ten sandbuckets filled—100 shells—wins.

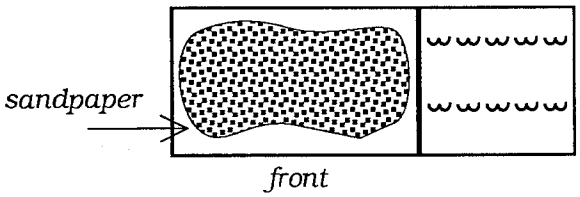
MAKING INSTRUCTIONS

Shells (about 220)
Use tiny real shells or macaroni shells.

Gameboards (2)
For each gameboard:
1. Cut two pieces of blue poster board, one 5 X 4, one 5 X 8, and one piece of sandpaper, 5 X 8.
2. Hinge the pieces of posterboard on the underside with filament tape.



3. Draw ten wavelets on the short side. Cut the sand to resemble a beach and glue it on the long side.



Sandbuckets (20)
Use small plastic or paper cups for buckets. Handles aren't necessary but it's nice to have two different colors—ten of each. Nut cups (used for parties and showers) work fine and can be purchased in stationery and paper supply stores.

Die
Use a foam or wooden cube to make a die numbered 4–9.

Store all materials in a half box.

THE EASTER EGG FACTORY (Forward Trading Game—2 Children)

Box ingredients→ lima bean "eggs" in mini box

two gameboards twelve "Easter" baskets

one die numbered 4–9

half or standard box for storage (size of box depends upon the size of your Easter baskets)

PLAYING INSTRUCTIONS

Take turns:

1. Roll the die to find out how many eggs will be in the hens' nests.
2. Take the number of eggs indicated.
3. Place them on the nest side of your gameboard, one egg per nest.
4. Each time you get ten eggs, put them in an Easter basket and move the basket to the "delivery area" (the white side of the board) to go to the coloring factory.
5. The first player to get six Easter baskets filled—60 eggs—wins.

MAKING INSTRUCTIONS

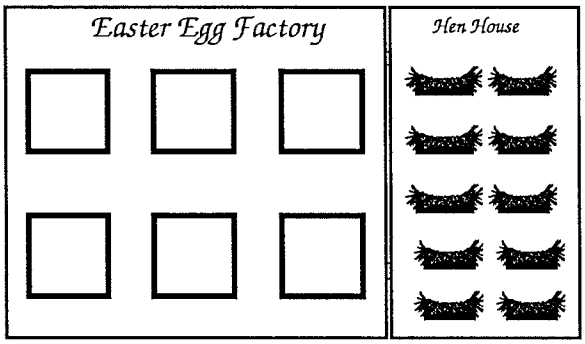
Eggs (about 150)

Buy a small bag of baby lima beans. You'll have enough to share with several friends.

Gameboards (2)

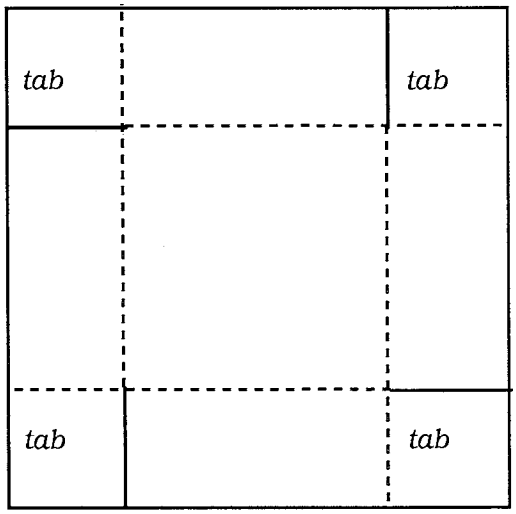
For each gameboard:

1. Locate Easter Egg Factory boards in cardstock portion of packet. Laminate and cut apart.
2. Hinge boards on the underside with short pieces of filament tape. (See Beachcomber Trading for diagram.)



Easter Baskets (12)

You can either buy tiny commercial Easter baskets (some craft stores sell tiny colored straw baskets) or make them if you're feeling ambitious. If you have a parent volunteer who is "crafty," you can make a set with two fabrics (such as pin dot) ironed to construction paper using Stitch Witchery. (Don't use a damp cloth when using Stitch Witchery with paper.) The baskets could also be made with Contact paper on construction paper. Cut and fold your baskets as below:



1. *Cut on all* solid *lines to create a paper pattern.*
2. *Cut baskets from bonded fabric / paper or Contact-covered paper.*
3. *Fold up sides on dotted lines.*
4. *Glue tabs to finish basket.*

Die

Use foam or wooden cube to make a die numbered 4–9.

Store all materials in a half or standard box.

SPACESHIP FACTORY (Forward Trading Game—2 Children)

Box ingredients→ 80 green triangles from your pattern blocks
two gameboards one die, 4–9
standard box for storage

PLAYING INSTRUCTIONS

Take turns:
1. Roll the die.
2. Take the number of triangles indicated. These triangles are spaceship components. It takes ten to complete a spaceship. Put them on the component side of your gameboard.
3. Each time you get ten triangles, move them to the spaceship side of your board and assemble a spaceship.
4. The first player to get four spaceships assembled wins.

MAKING INSTRUCTIONS

Gameboards (2)
Locate gameboards in the cardstock portion of this packet. Laminate.

Die
Use foam or wooden cube to make a die numbered 4–9.

Store gameboards, die, and pattern blocks in a standard box.

GO FOR BROKE (Challenging Backward Trading Game—2 Children)

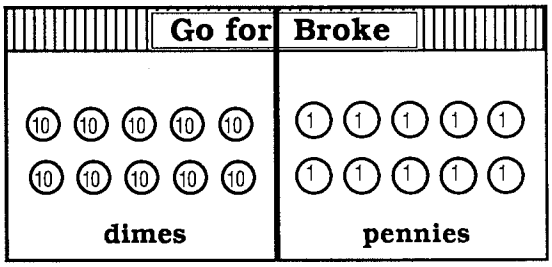
Box ingredients→ 20 dimes in coin tube 20 pennies in coin tube
two gameboards spinner
half box for storage

PLAYING INSTRUCTIONS

1. Set out dimes and pennies to cover all the coins on your gameboard.
2. Spin to determine who will be first (person spinning higher amount starts).
3. Take turns spinning and removing coins from your boards until no more plays are possible.
4. Player with least amount of money at the end wins.

MAKING INSTRUCTIONS

Gameboards (2)
1. Locate gameboards in cardstock section of this packet. Cut apart.
2. Laminate.
3. Hinge each board on the backside with short pieces of filament tape.



Spinner
Locate spinner top in blacklines. See Spin, Count, and Make a Book for assembly directions, but *be sure* to glue real coins to the top before you cover with clear Contact paper.

Store gameboards, spinner, and coins in coin tubes in half box.

GIVE IT AWAY (Backward Trading Game—2 Children)

Box ingredients→ 120 safety pins, clipped into sets of tens
two gameboards spinner
half box for storage

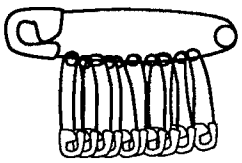
PLAYING INSTRUCTIONS

1. Set six sets of safety pins on the tens side of your gameboard.
2. Take turns. Spin to find out how many pins to take off your board each time it's your turn.
3. Winner is the person who first gets closest to zero with no other possible plays left.

MAKING INSTRUCTIONS

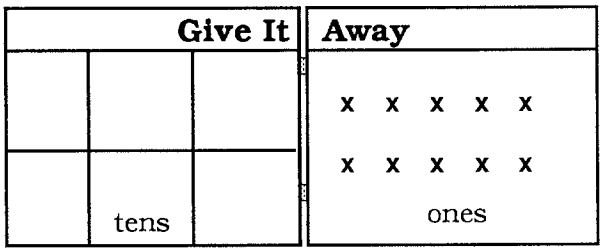
Safety Pins

Get 12 large safety pins and 108 smaller safety pins. To make each set of ten pins, slide nine small pins onto the larger pin and fasten. Make twelve sets.



Gameboards (2)

1. Locate gameboards in cardstock section of this packet. Cut apart.
2. Laminate.
3. Hinge each board on the back side with short pieces of filament tape.



Spinner

Locate spinner top in blacklines. See Spin, Count, and Make a Book for assembly directions.

Store gameboards, spinner and safety pins (in a small box of their own) in a half box.

200 (Challenging Forward Trading Game—2 Children)

Box ingredients→ double spinner two gameboards
counters (ones, tens, hundreds)
standard box for storage

PLAYING INSTRUCTIONS

1. Each player takes a turn to spin each side of the double spinner (for example, 10 + 6).
2. They build the appropriate amount with counters.
3. Play continues until one player reaches 200.

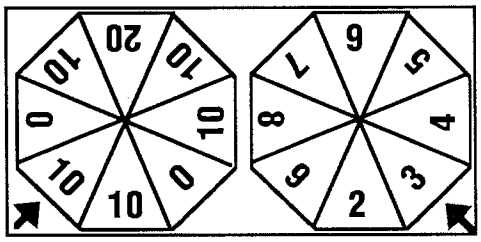
MAKING INSTRUCTIONS

Counters

Look around your school storerooms to see if any of the following are stashed away: Cuisenaire Rods (only 10s and 1s), Unifix cubes, Nuefeld Number Blox, Multi-Link blocks or other similar material that is designed to represent ones, tens, and hundreds. Beansticks would also work well, but have some parents or your own children do the glue work. To make beansticks, glue ten beans on each popsicle stick or tongue depressor. The hundreds are made by using three sticks as the foundation and gluing ten beansticks to them.

Double Spinner

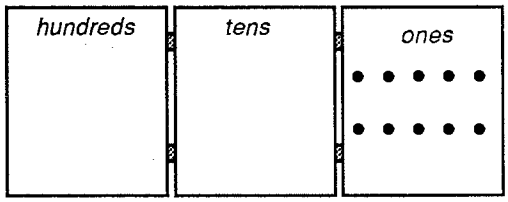
Locate spinner tops in blacklines. See Spin, Count, and Make a Book for assembly directions.



Gameboards (2)
The dimensions of these will depend upon the counters you've chosen. They need to have three sections: hundreds, tens, ones.

Store spinner, gameboards, and counters in a standard box.

Trading Boards



back hinged with filament tape

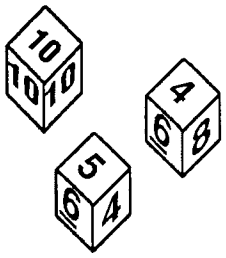
UNIFIX STACKS (Column Addition Trading Game—2 Children)

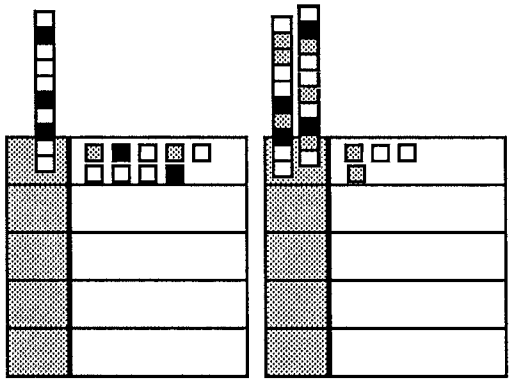
Box ingredients→

record sheets
more/less spinner
two gameboards
unifix cubes
two dice numbered 4–9 (use wooden or foam cubes)
two dice numbered with 10 on all sides
standard box for storage

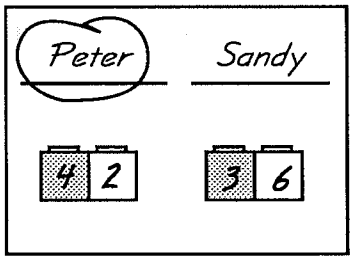
PLAYING INSTRUCTIONS

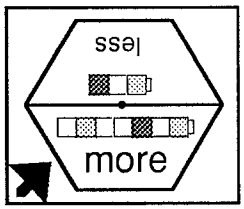
1. The players decide how many dice will be used for the game (2, 3, or 4).
2. The first player rolls the dice and adds (for example: 4 + 5 + 10 = 19). He or she then sets out that many cubes (grouped by tens and ones) on the first row of the gameboard.





3. Play continues until both players have filled their gameboards.
4. Each player then determines his or her total by pulling all the ones down to the very bottom, making any possible groups of ten, moving the groups of ten up to the top of the lavender side, and pulling down all the tens. Total is written on the record sheet.
5. The more/less spinner is then spun to determine the winner. Children circle the winner on their record sheets.





MAKING INSTRUCTIONS

Gameboards
You need two each 8 X 10 tag and 1-1/2 X 10 lavender construction paper. Glue lavender strip down left sides. Divide boards into five equal sections.

More/less Spinner
1. Cut an appropriately-sized base and a 1"-square washer from sturdy matte or poster board.
2. Use Unifix Stacks more/less spinner from blacklines for spinner top.
3. Follow construction directions from Spin, Count, and Make a Book.

Record Sheets
Locate Unifix Stacks record sheet in blackline masters. Run copies and cut apart. Make a tag pocket for the small sheets. Store the tag pocket of sheets in a standard box with dice, gameboards, and spinner. Keep the unifix cubes on your general math materials shelf.

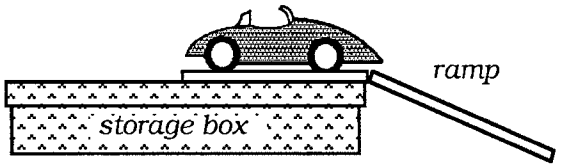
Working with Higher Numbers

GRAND PRIX (2 Children)

Box ingredients→ two or more small, heavy cars
centimeter or sewing measuring tape
record sheets
race ramp
more/less spinner
half box for storage

PLAYING INSTRUCTIONS

1. Set up your race ramp on the box as pictured below.

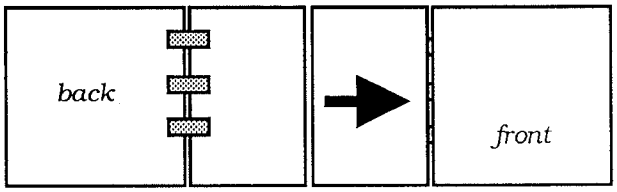


2. Place your car on the start arrow and give it a slight tap to start it down the ramp.
3. Have your partner help you use the measuring tape to determine how far it traveled.
4. Write the number for the distance measured on your record sheet.
5. Let your partner have a turn. Measure and record.
6. After your record sheet is completed, spin the more/less spinner to determine the winner.
7. Repeat several times. Staple your booklets together and show them to a grown-up.

MAKING INSTRUCTIONS

Spinner
Locate the spinner top in the packet blacklines. Assemble as directed in Spin, Count, and Make a Book.

Starting Ramp
1. Cut two pieces of matte board, one 4 X 6 and one 6 X 6.
2. Hinge on the underside with short pieces of filament tape.
3. Draw a "go" arrow on the short section.



Measuring Tape
Locate a centimeter measuring tape in your school supplies or purchase a measuring tape for sewing from a fabric store.

Cars
Gather two or more cars (such as Hot Wheels or Matchbox—the heavy kind).

Record Sheets
Locate Grand Prix record sheets in blacklines. Make copies, cut apart and store in a half box with cars, ramp, more/less spinner, and measuring tape.

NOTE: It seems to help the children stay on task better if they each take a few trial runs before they begin to measure and record.

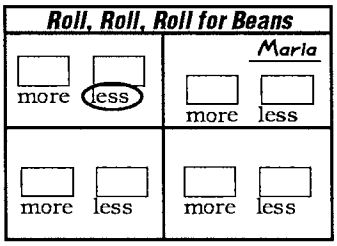
ROLL, ROLL, ROLL FOR BEANS (2 Children)

Box ingredients→

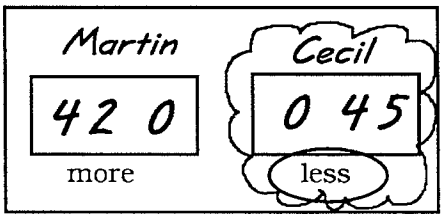
- two game boards
- one die (0–5)
- record sheets
- more/less spinner
- beans in hundreds, tens and ones
- zero card
- standard box for storage

PLAYING INSTRUCTIONS

1. Get record sheets for you and your partner. Write your names.
2. Spin the more/less spinner to determine whether "more" or "less" will win your first game. Circle "more" or "less" on your record sheet in the first section.
3. Roll the die. Decide whether your first roll will be used for hundreds, tens, or ones. Choose careful-ly—each turn counts and you *can't* change your mind! Set your chosen beans on your gameboard.



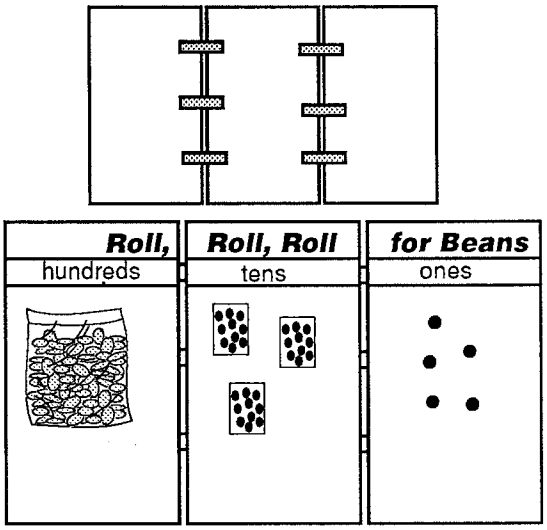
4. Give your partner a turn. He or she needs to decide whether to choose hundreds, tens, or ones for the number rolled and then set the appropriate quantity of beans on the gameboard.
5. Each of you rolls again for two more turns choosing how to set up the number rolled each time.
6. When each of you has taken all three turns, look at your boards and count your beans together by hundreds, tens, and ones. Decide who has more and who has less.
7. Record the number of beans on each of your boards. Decide who won. Mark the winning number.



8. Repeat the game three more times. Show a grown-up your paper.

MAKING INSTRUCTIONS

Gameboards



Locate the three sheets of gameboards in cardstock portion of packet. Laminate. Cut the sections apart and hinge on the backside with tape.

Beans

Buy a bag of small beans. Use pint-sized zip-lock bags to count out hundreds—they can be cut down and taped shut with filament tape. Make ten bags. Glue sets of ten beans on small poster board cards—tacky glue or a glue gun holds them best. You need ten cards, each with ten beans. Put a handful of loose beans in the box and your beans are ready.

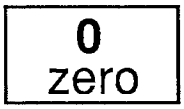
Die

Locate pattern for die in blacklines. Use it to cut and score a matte board die. Write the numerals 0–5 on your die. You could also use a wooden or foam cube for your die.

Record Sheets

Locate the record sheet in the blacklines and run copies.

Zero Card
Holding an empty place can be hard. You might want to make a zero card.



More/Less Spinner
Locate spinner top in blacklines and assemble as directed in Spin, Count, and Make a Book. Store beans, record sheet, gameboards, spinner, die and card in a standard box.

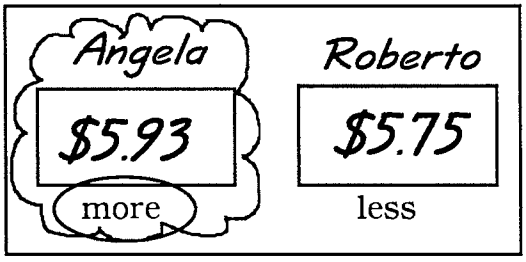
RAGS OR RICHES (2 Children)

Box ingredients→

two gameboards
one game spinner
record sheets
one more/less spinner
"dollars," dimes, pennies
half box for storage

PLAYING INSTRUCTIONS

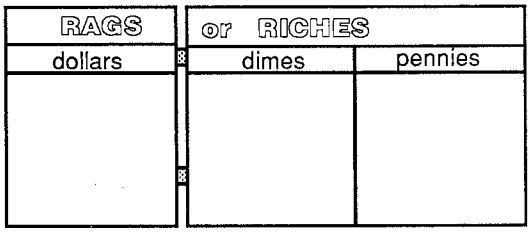
1. Get record sheets for you and your partner. Write your names.
2. Spin the more/less spinner to determine whether "more" or "less" will win your first game. Circle "more" or "less" on your record sheet in the first section.
3. Spin the spinner. Decide whether your first spin will be used for dollars, dimes or pennies. Choose carefully—each turn counts and you *can't* change your mind! Set your chosen money on your gameboard.
4. Give your partner a turn. He or she needs to decide whether to choose dollars, dimes, or pennies for the number spun and then set the appropriate money on the gameboard.
5. Each of you spins again for two more turns, choosing how to set up the number spun each time.
6. When you've each finished your three turns, look at your boards and count your money together. Decide who has more, who has less.
7. Write the amount of money you each counted in the appropriate spaces of your record sheets.



8. Repeat the game three more times. Show a grown-up your paper.

MAKING INSTRUCTIONS

Gameboards
Locate the gameboard sheet in cardstock portion of the packet. Laminate and cut the sections apart. Hinge each set with tape on the back.



Money
Locate the blackline for dollar bills and run two copies on green paper. (You'll need 18 for box.) Purchase coin tubes (available at any hobby shop) to store 18 dimes and 18 pennies. (We buy a nickel size tube for pennies, a penny size for dimes so they can slip in and out easily.) Use a Sanford Sharpie pen to mark the height of coins in each tube for accountability.

Spinners
Locate the game spinner top and the more/less spinner top for Rags or Riches in blacklines. Assemble as directed in Spin, Count, and Make a Book.

Record Sheets
Locate the record sheet in blacklines and run copies.

Store money, record sheets, spinners, and gameboards in half box.

MATRIX MADNESS (2 Children)

Box ingredients→ record sheets
playing cards
matrix card
standard box for storage

PLAYING INSTRUCTIONS

1. You each need a copy of the record sheet.
2. Write your names on your record sheets.
3. Set out the large matrix card to help you.
4. Mix up the tiny cards and put them in a pile face down.
5. Draw a card from the pile. Figure out the number and tell your partner. If your partner agrees, write the number on your record sheet in the correct box. The first person to get ten in a row wins (across, up and down, or diagonally).
6. Take turns until someone wins.

MAKING INSTRUCTIONS

Record Sheets
Locate record sheet in blacklines and run copies.

Matrix Card
Locate matrix card in cardstock portion of the packet and laminate.

Playing Cards
Locate sheets of playing cards in cardstock portion of the packet. Laminate and cut apart.

Store record sheets, matrix card, and playing cards in a standard box.

Blacklines

Patterns, cards, spinners, and other materials you'll make for the Practice & Enrichment Boxes described in this packet.

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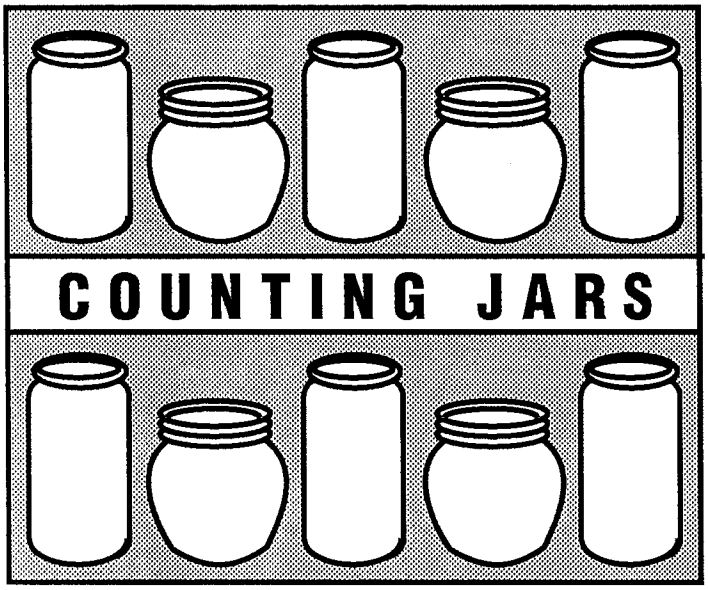
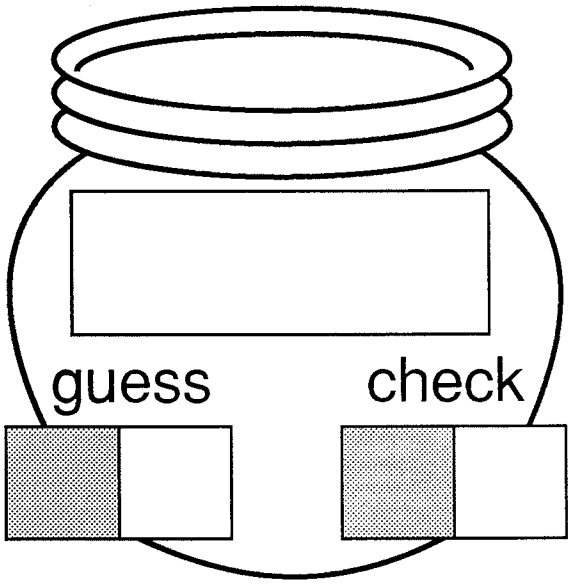

COUNTING JARS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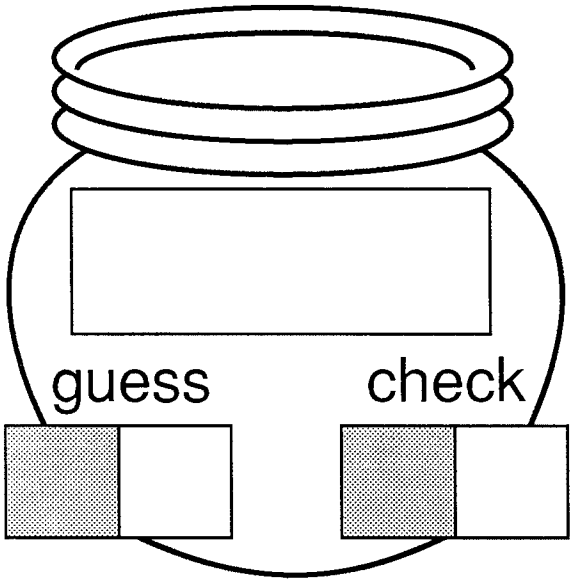
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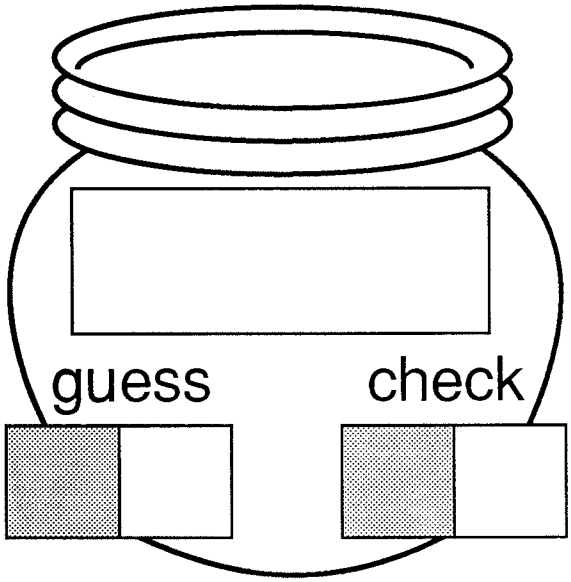
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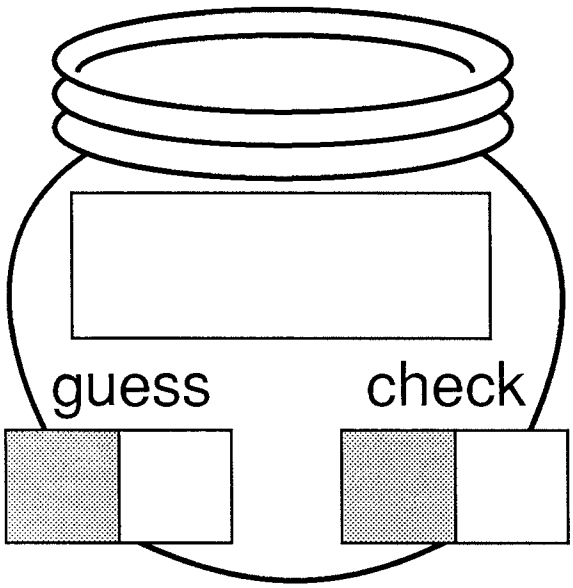
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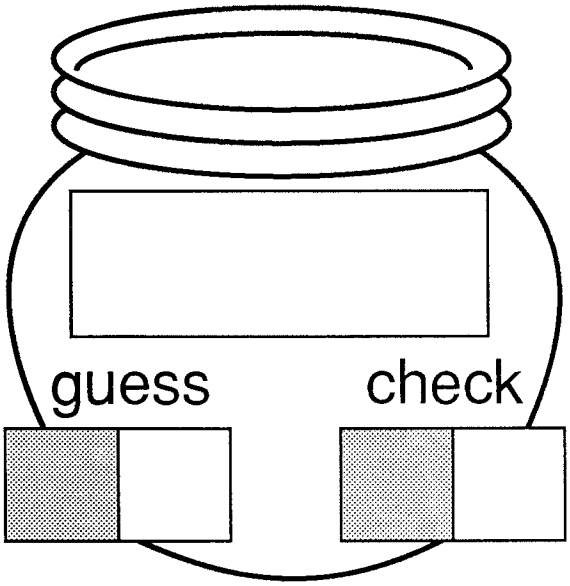
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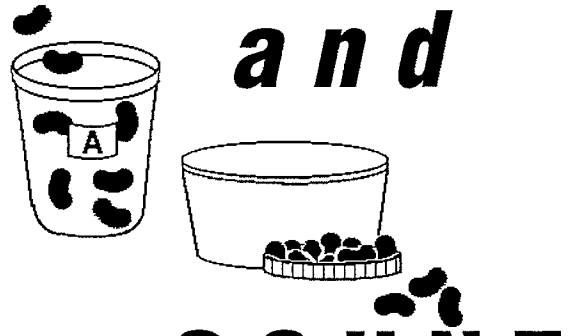
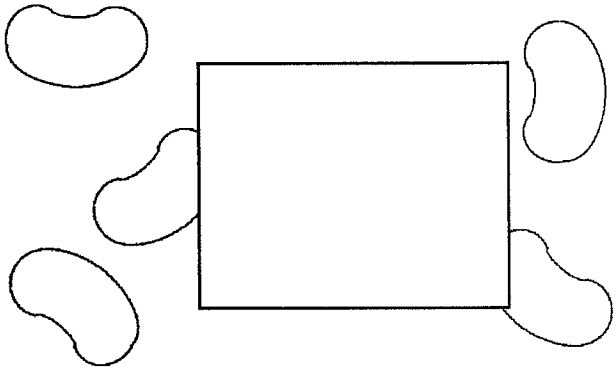
FILL and COUNT





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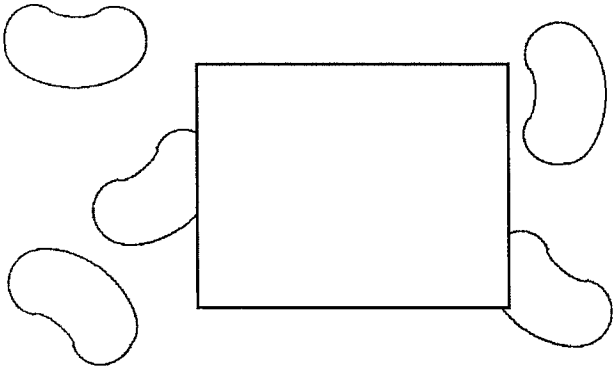

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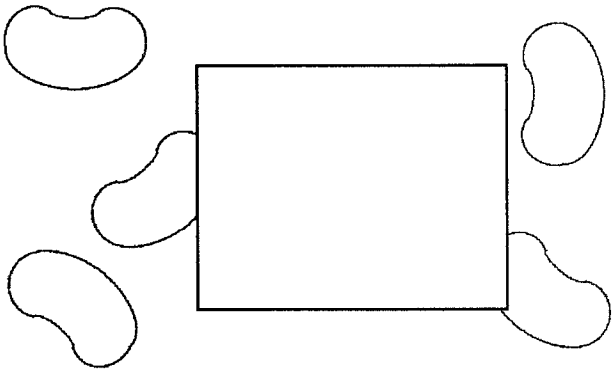

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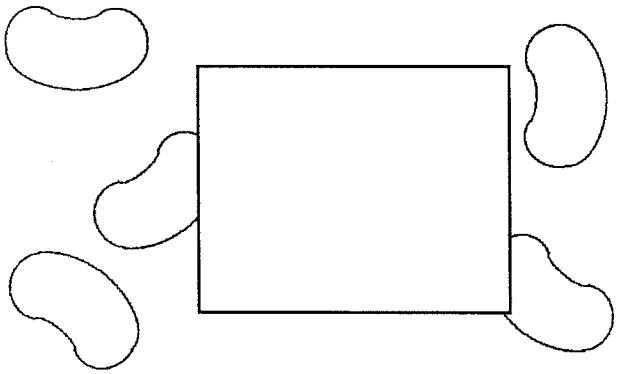

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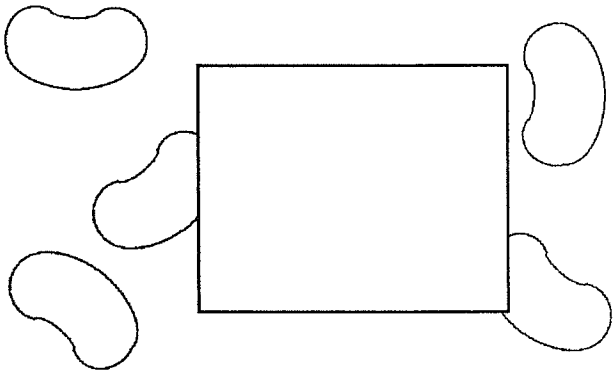

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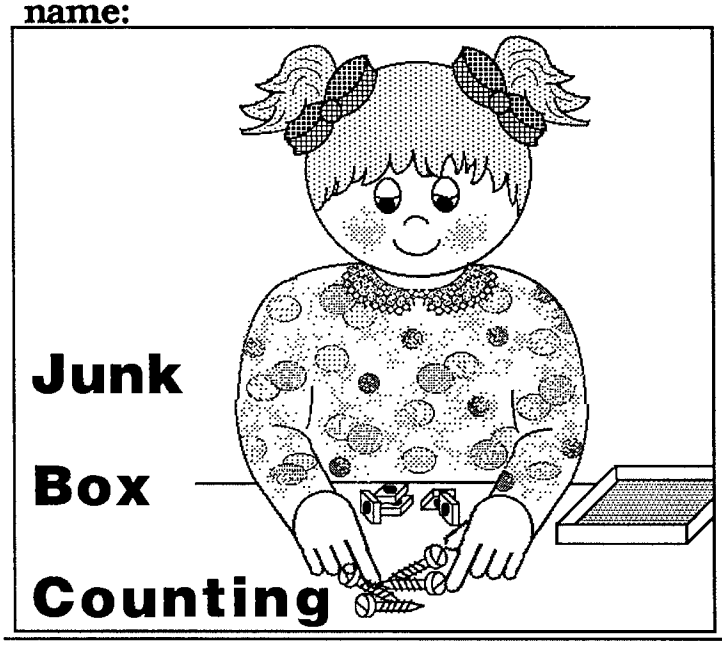

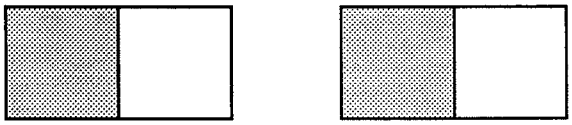

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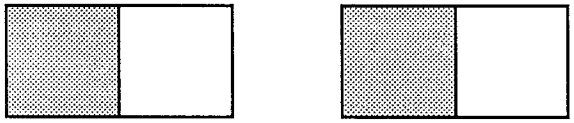

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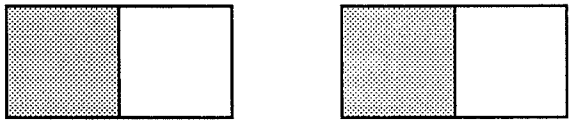

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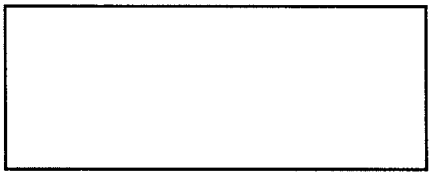

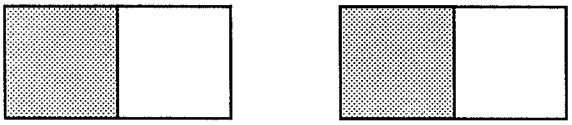

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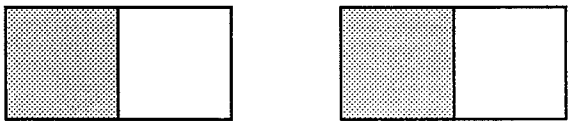

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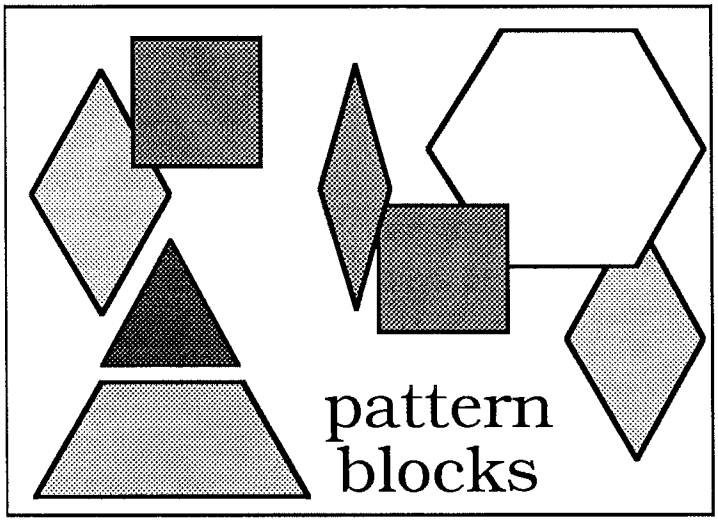

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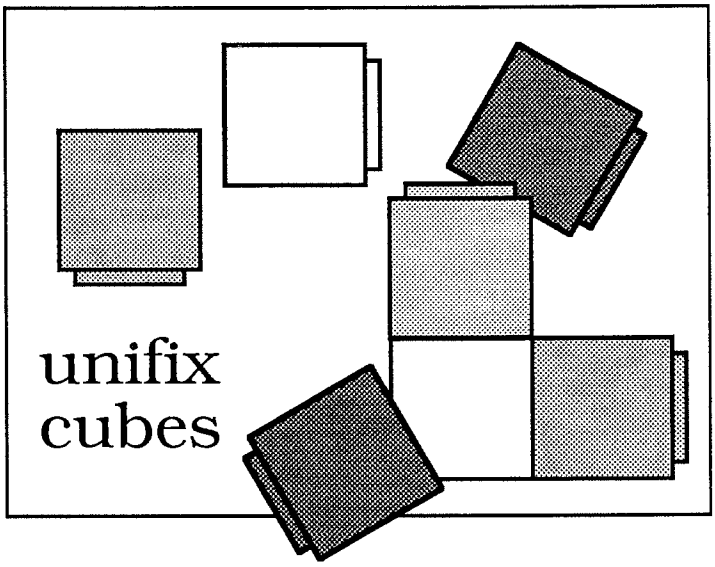

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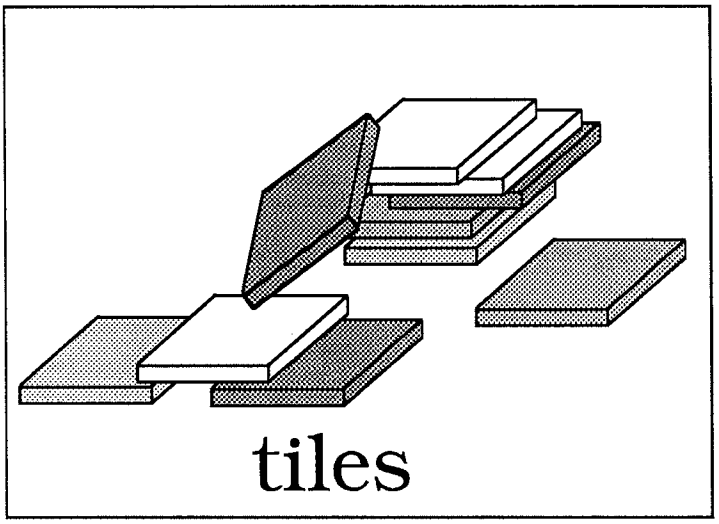

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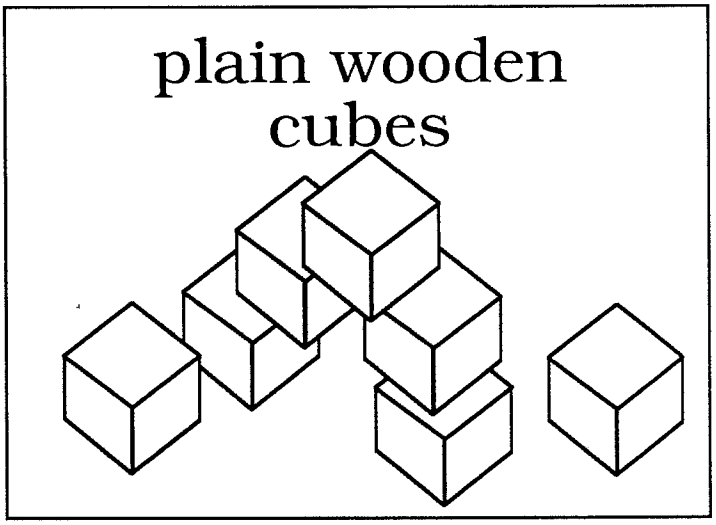

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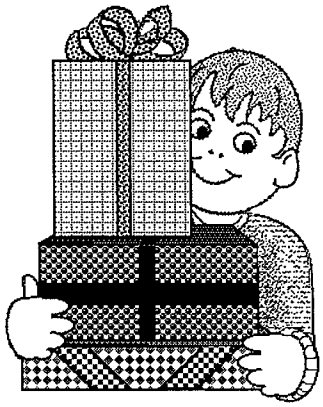
Gift Wrap Counting



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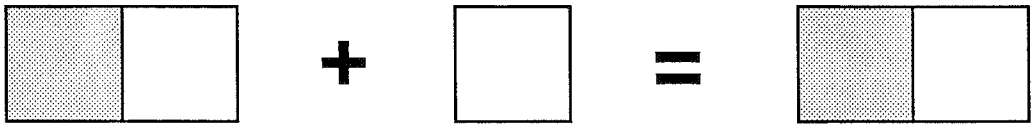
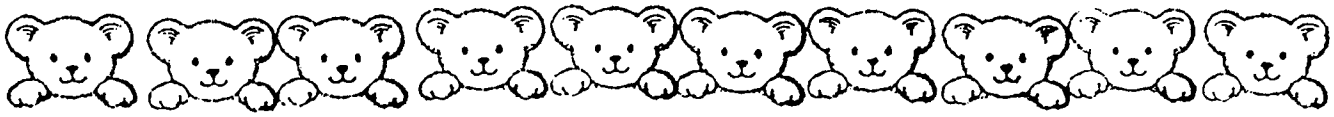
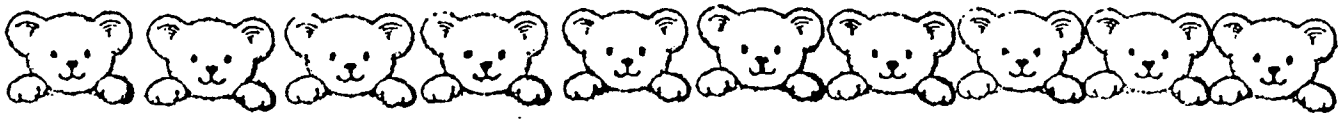
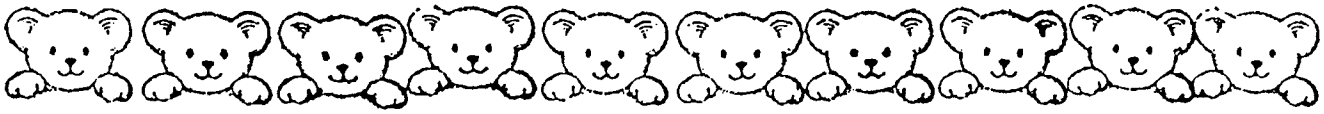
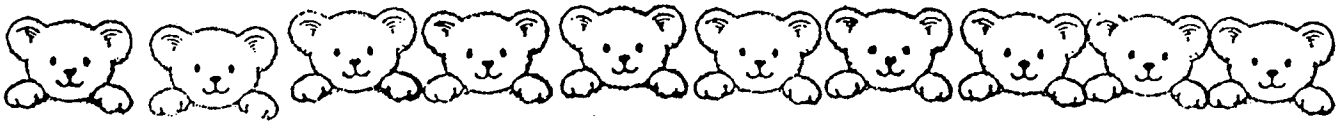
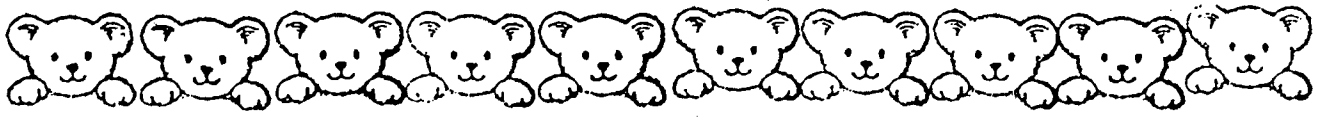


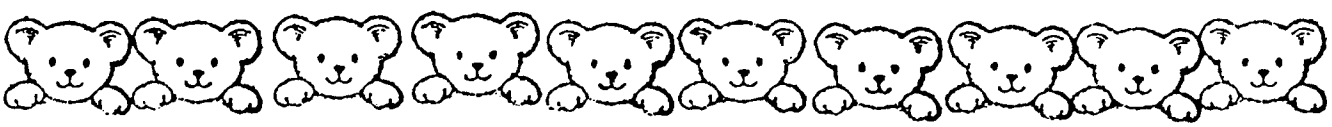


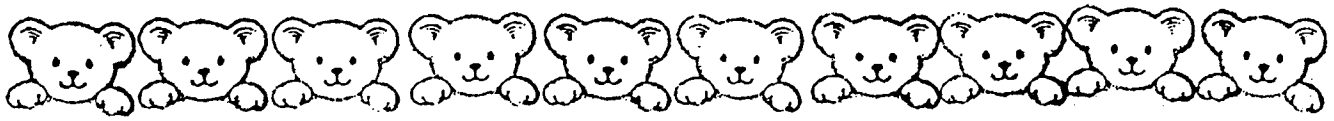


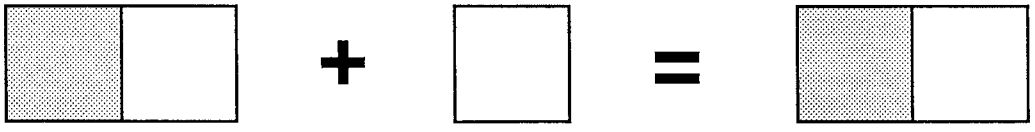


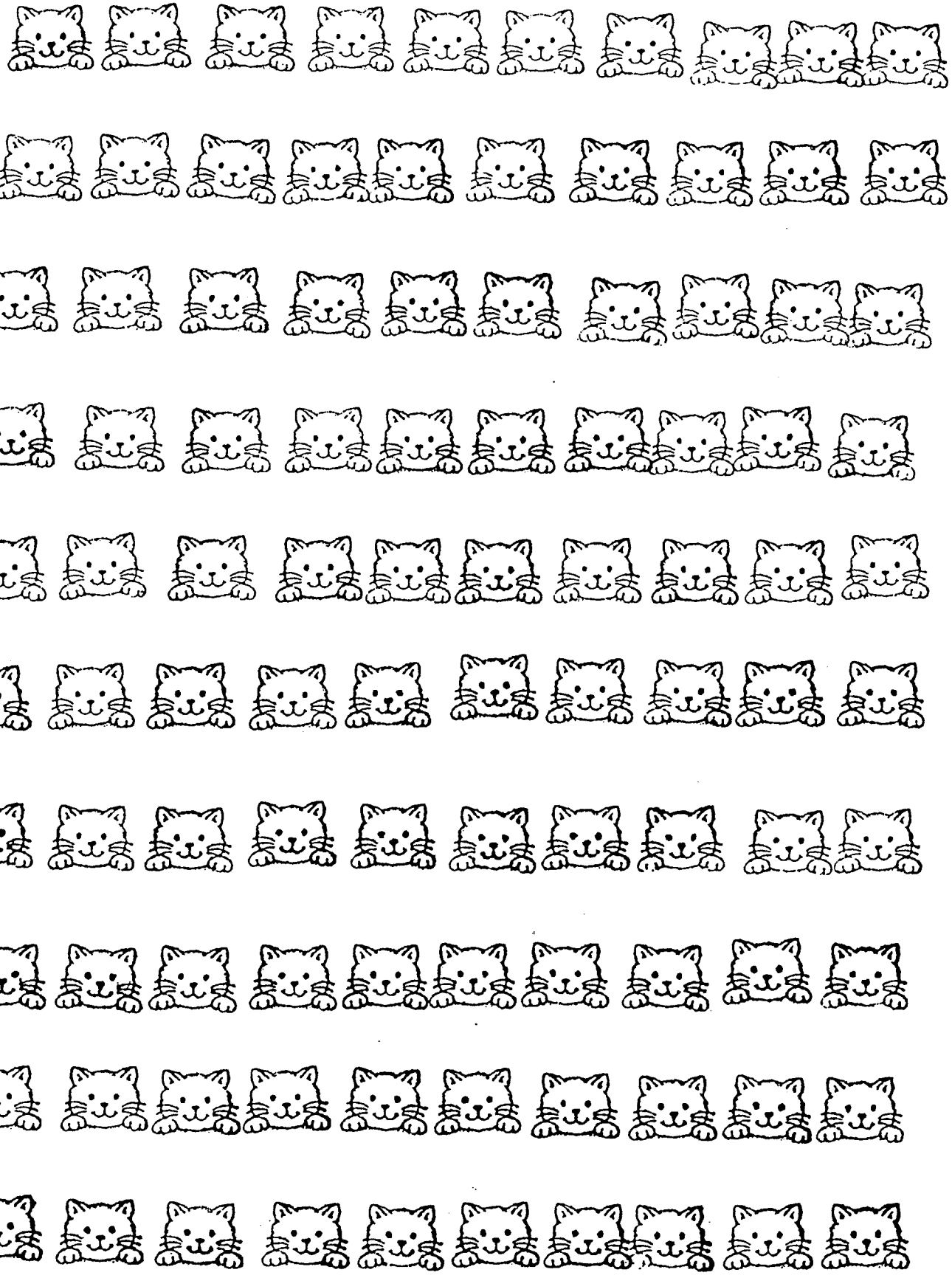


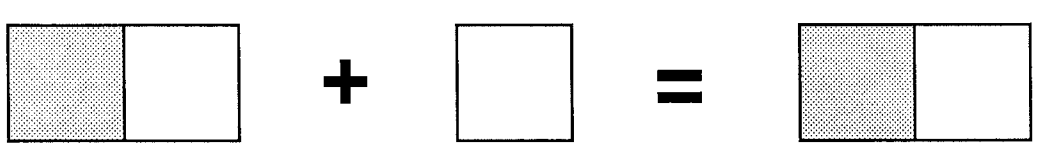


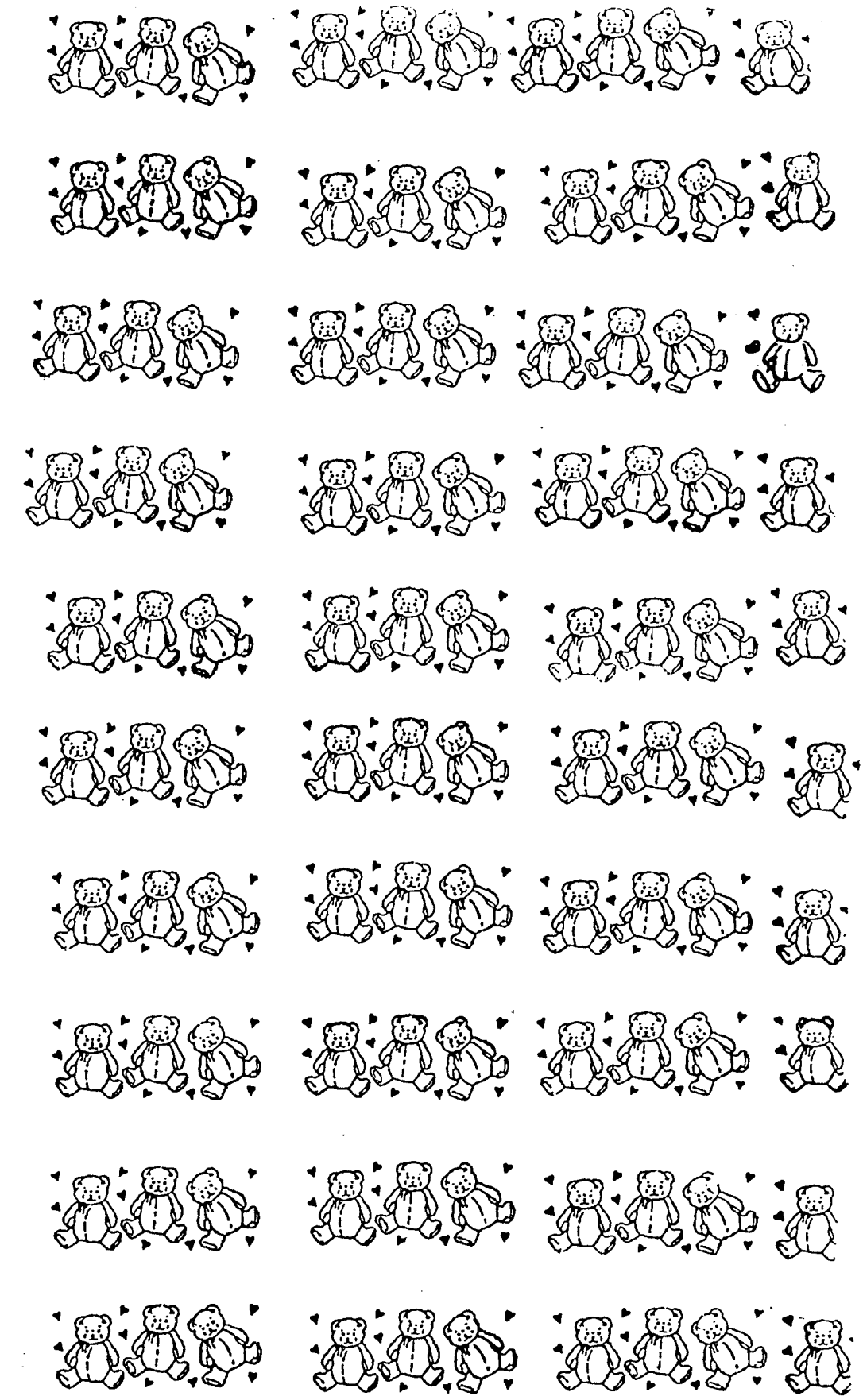


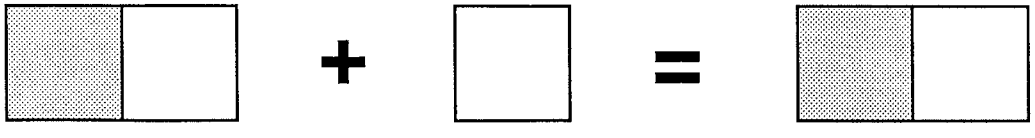


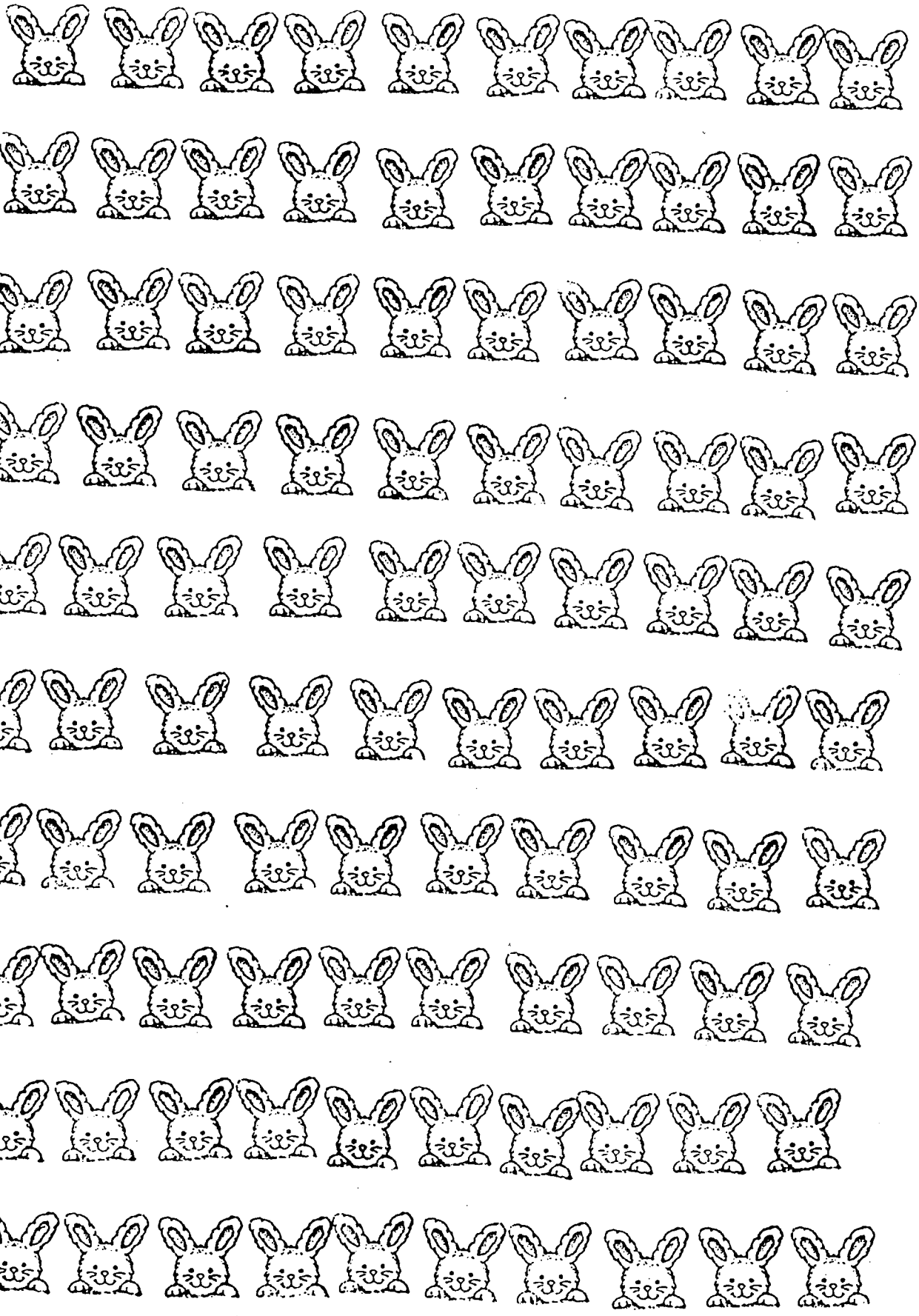


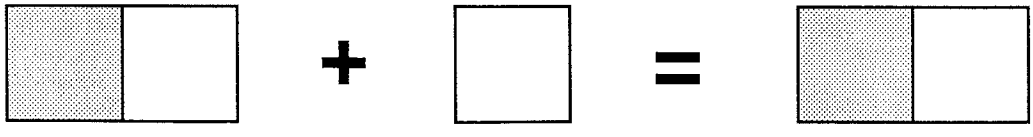


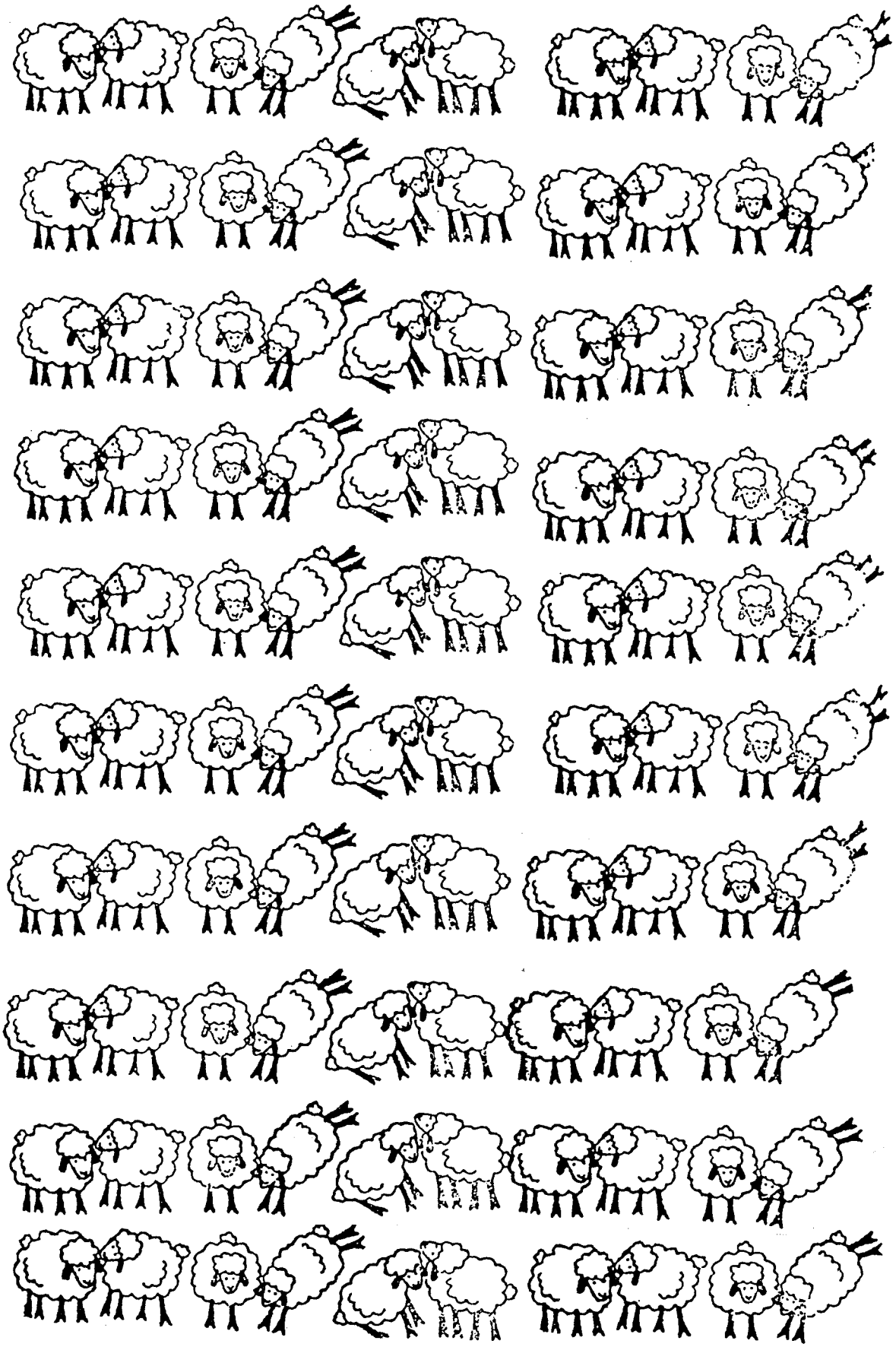


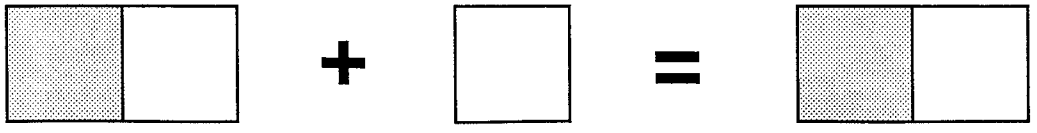


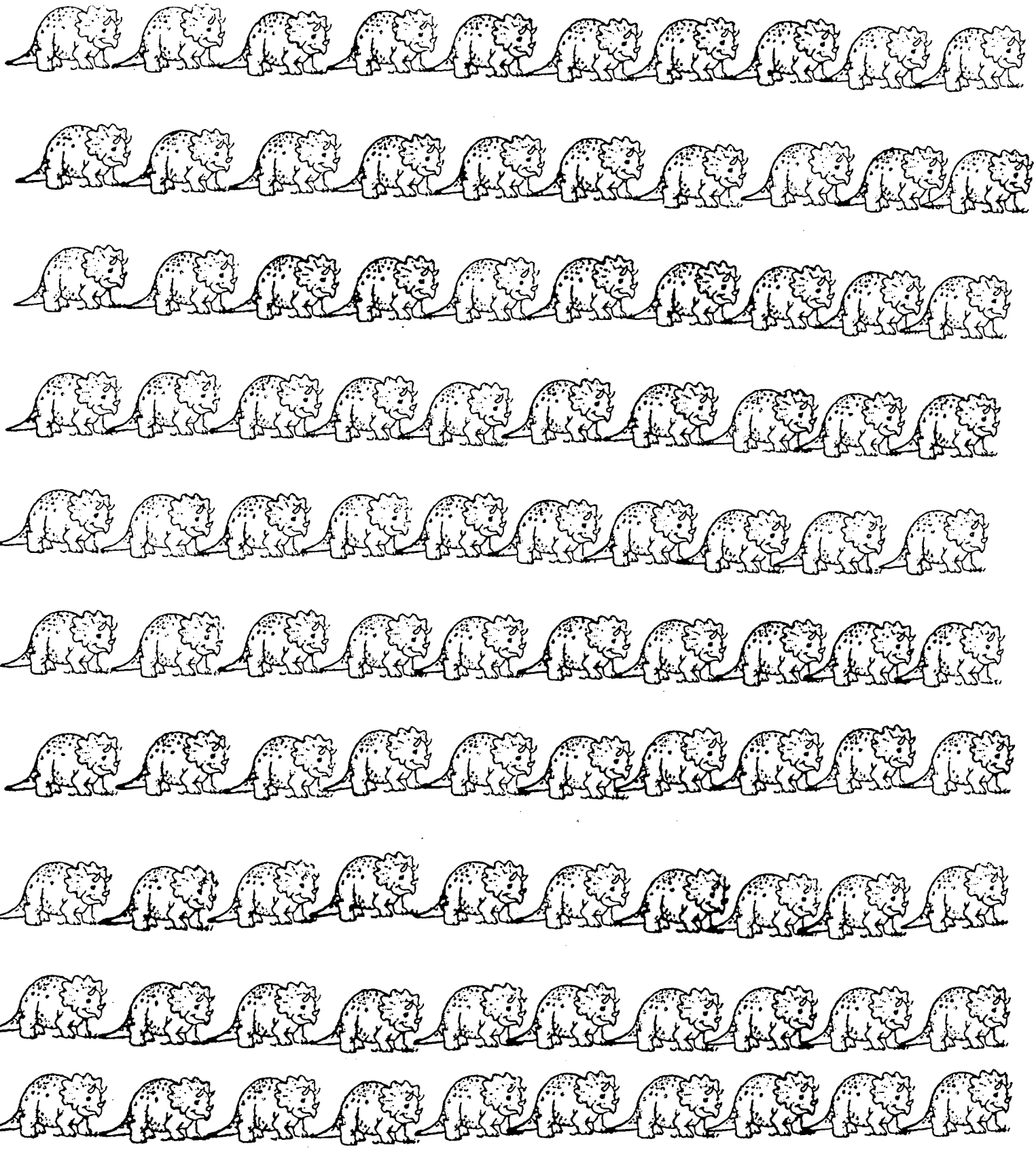


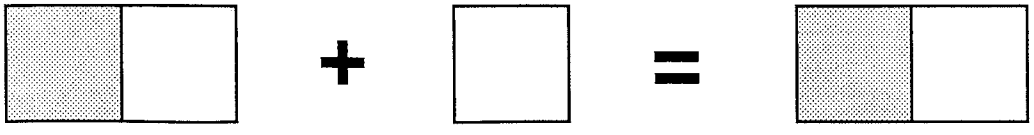




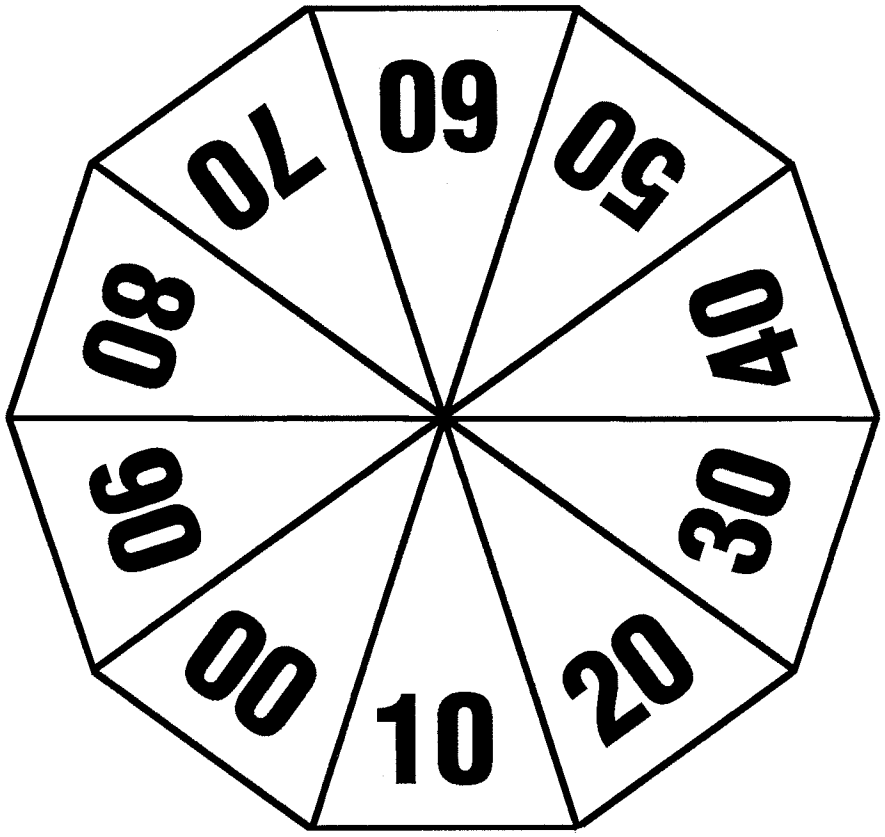


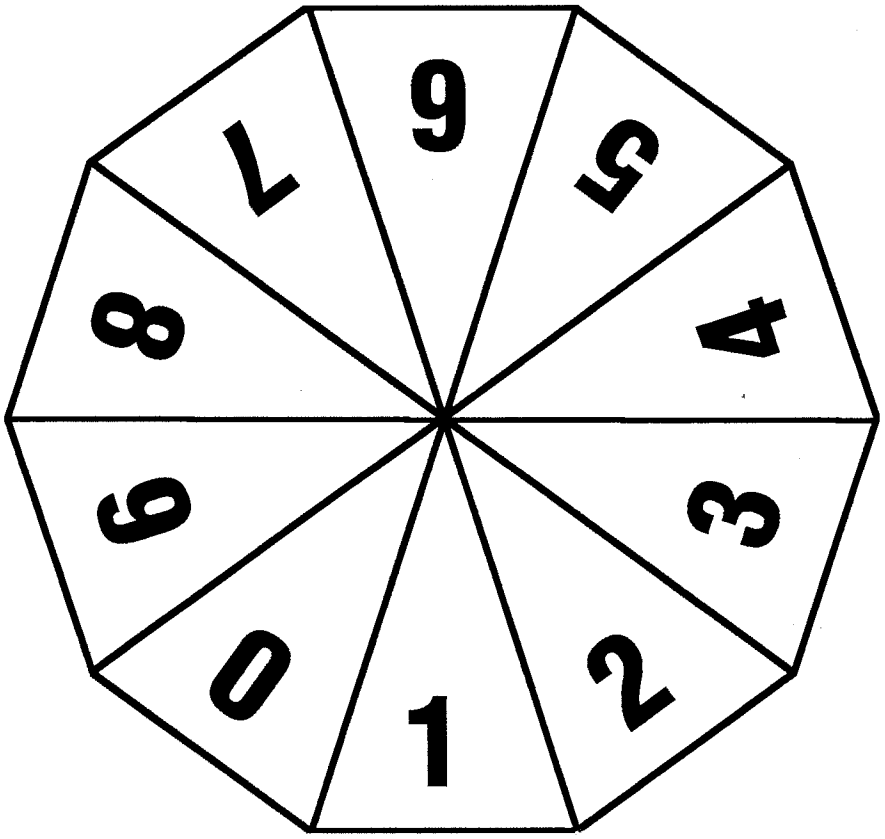




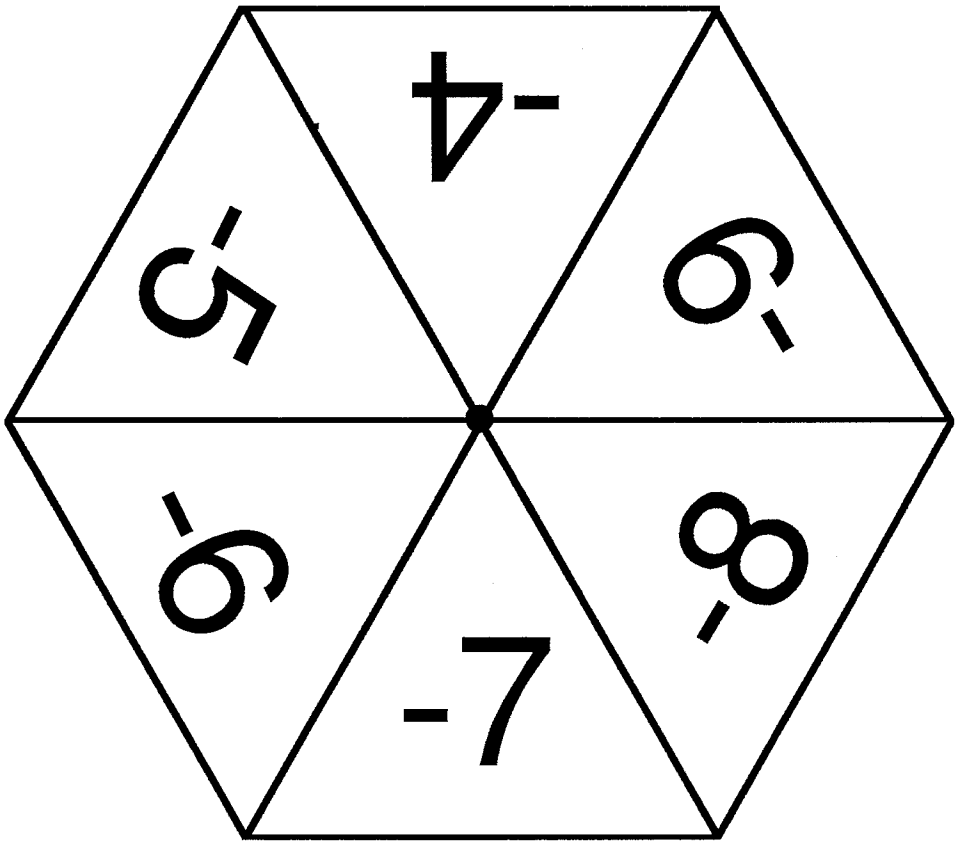


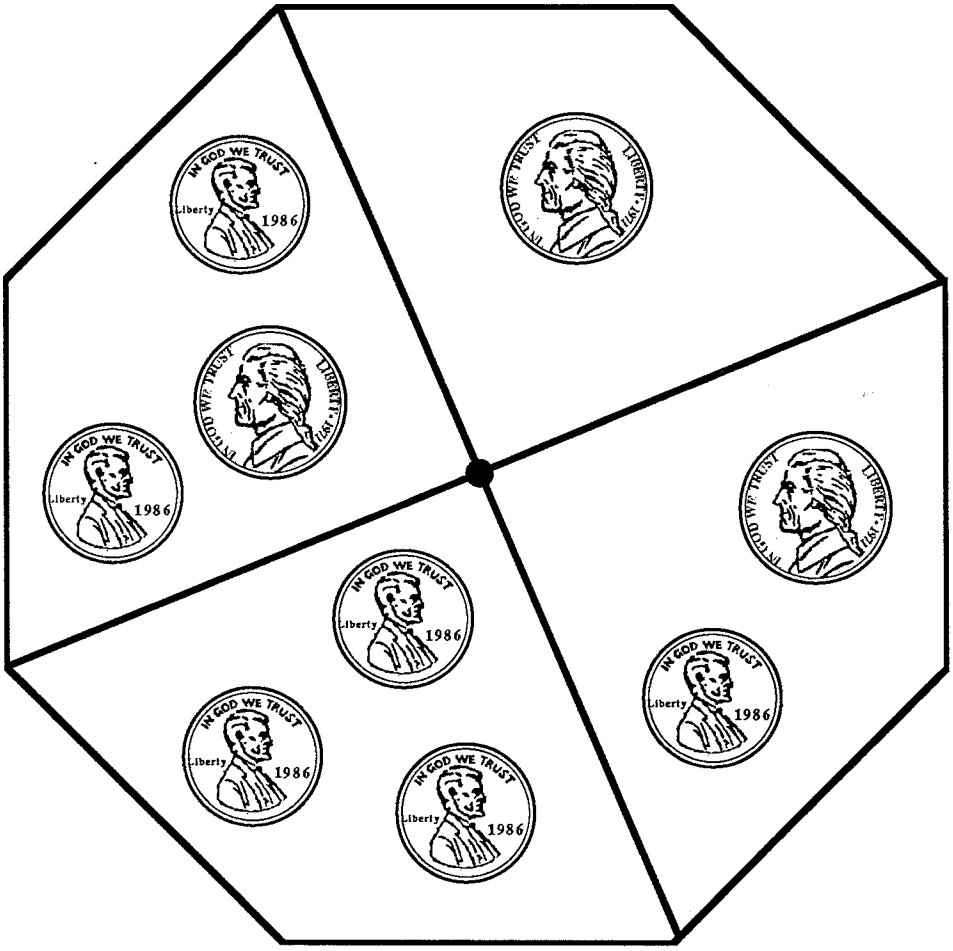
Spin, Count and Make a Book Spinners





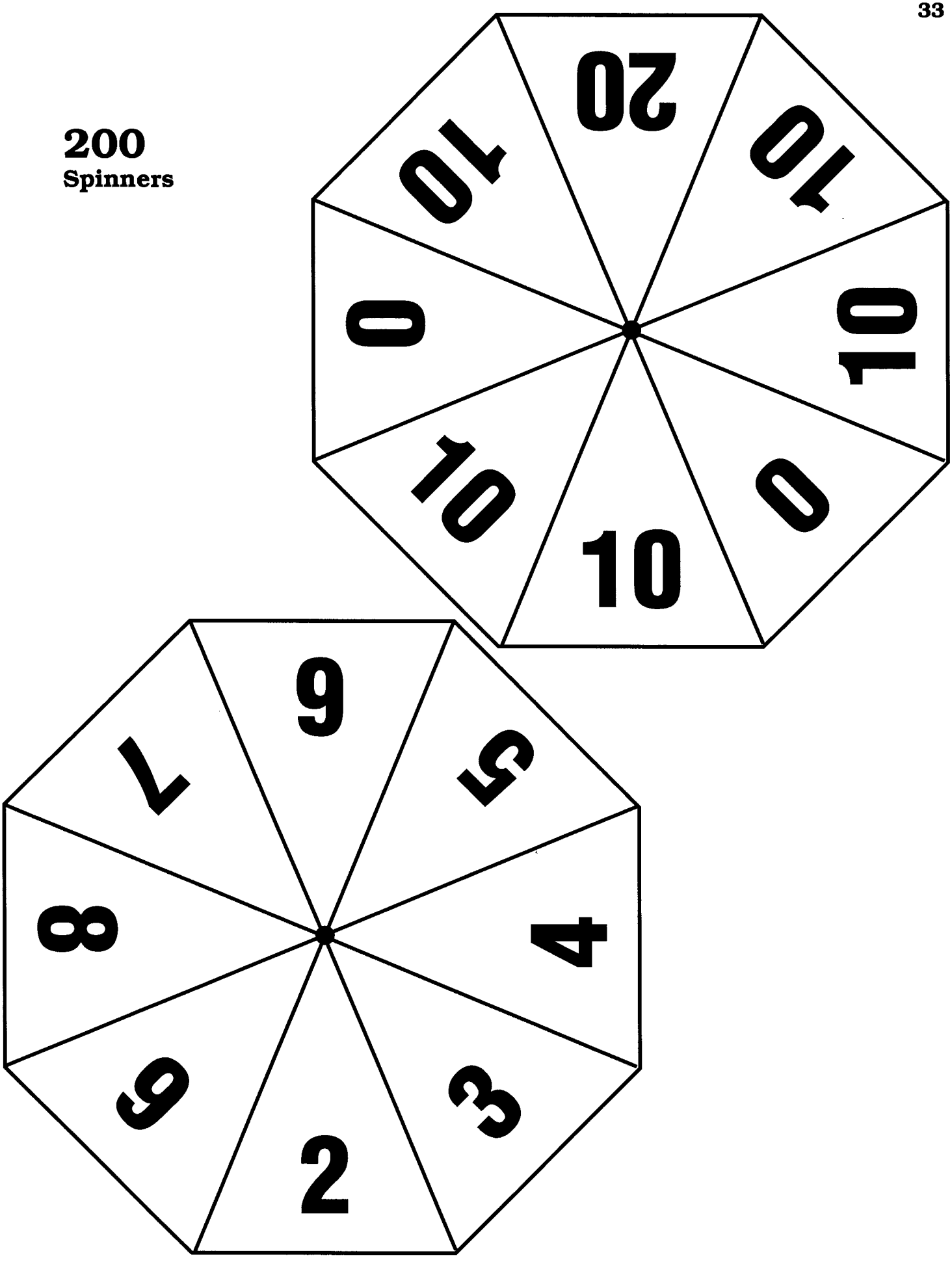
Give It Away Spinner

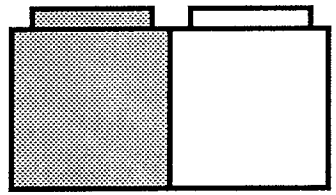


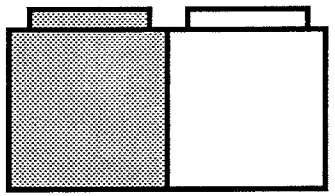


Go for Broke Spinner

200
Spinners

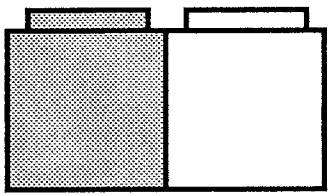


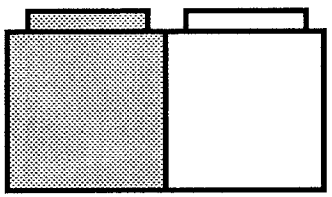


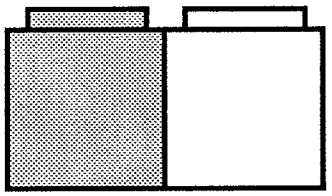


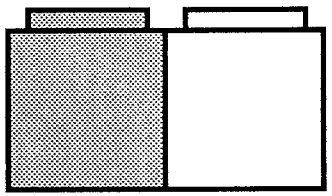
UNIFIX STACKS

name _____

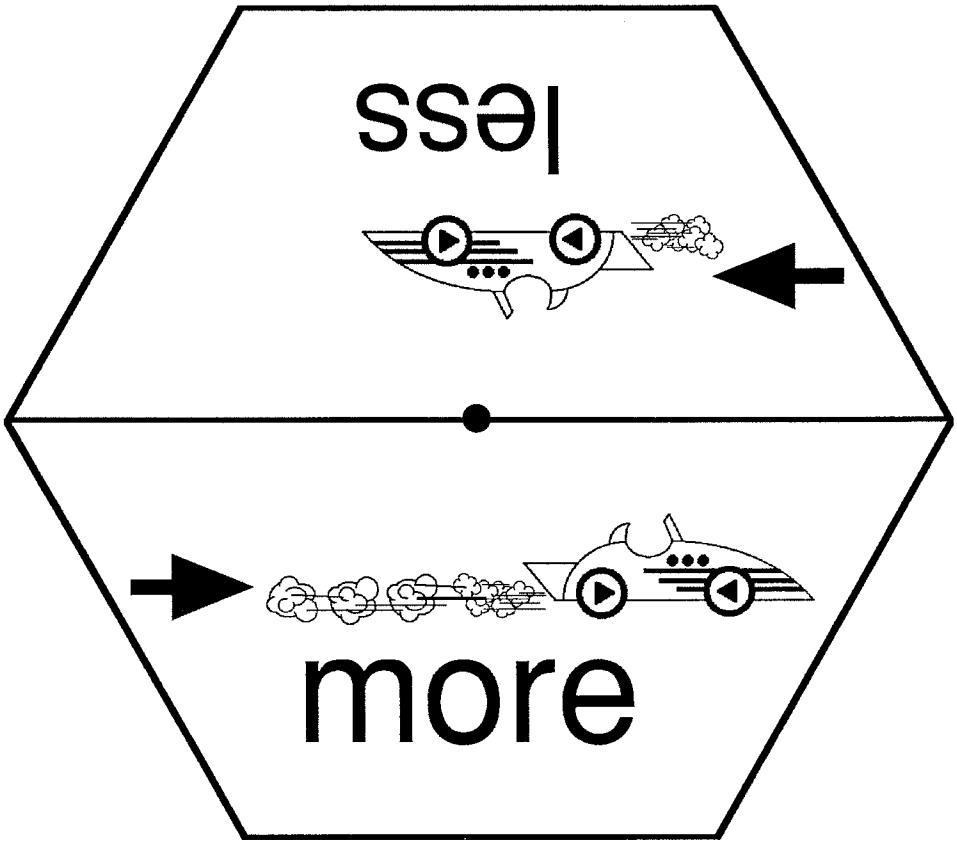


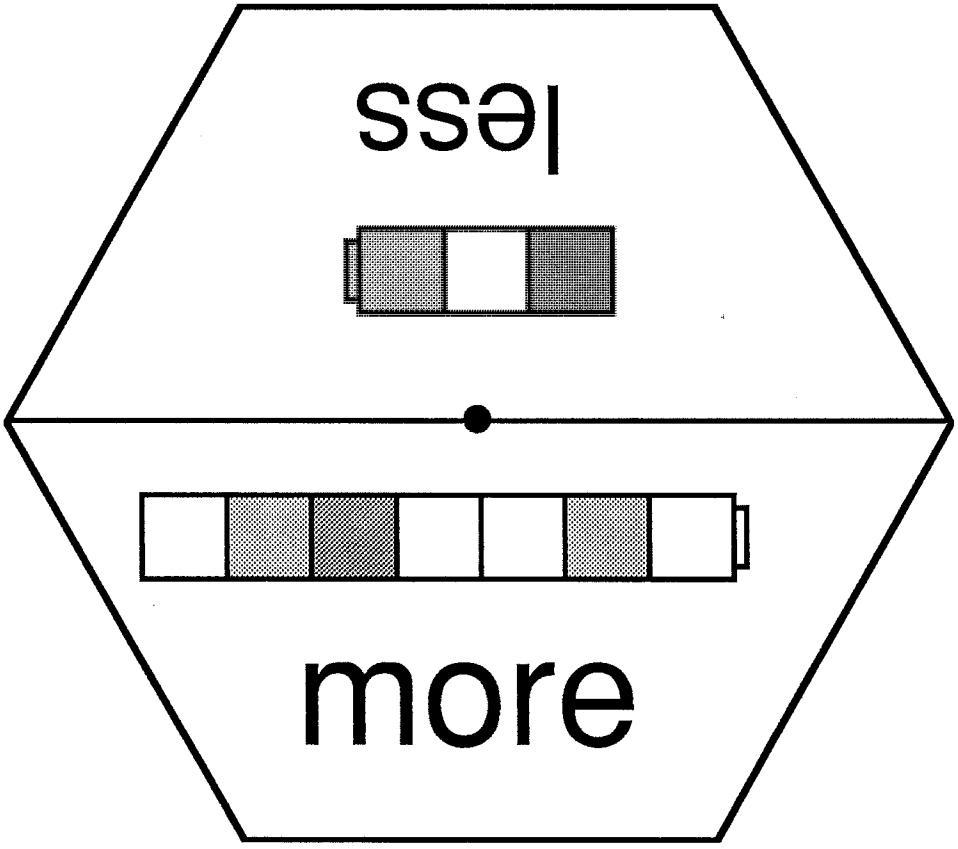




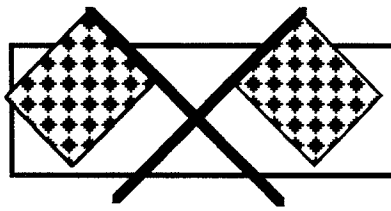


Grand Prix Spinner

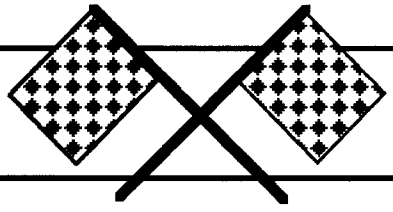




Unifix Stacks Spinner



Grand Prix



Grand Prix

Roll, Roll, Roll for Beans

name _____

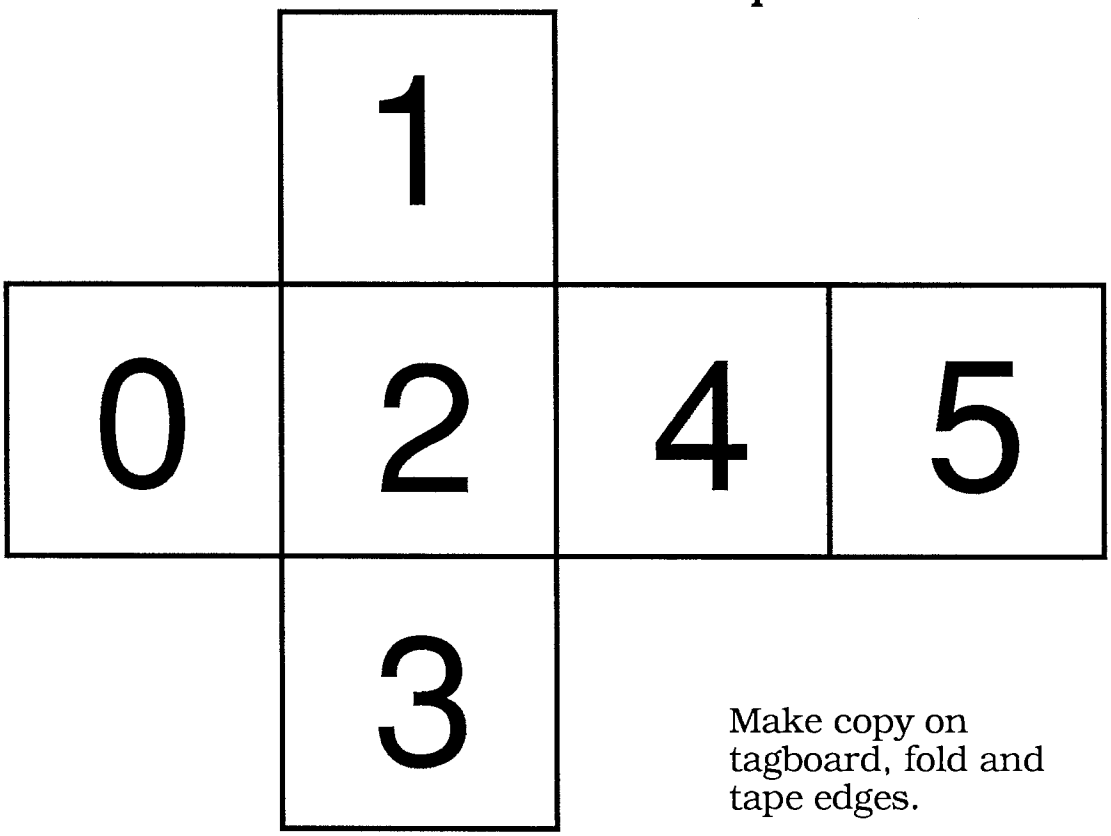
more less

more less

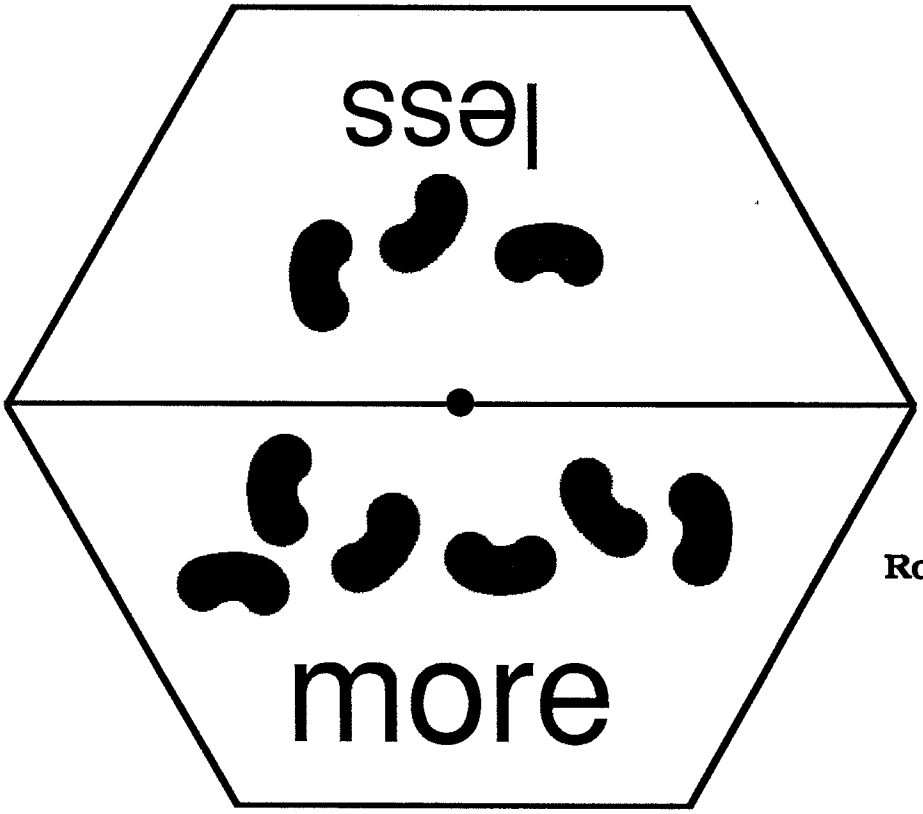
more less

more less

Roll, Roll, Roll for Beans
die pattern



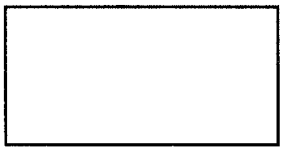
Make copy on tagboard, fold and tape edges.



Roll, Roll, Roll for Beans
spinner

name _____

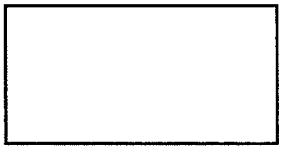
RAGS or RICHES?



more

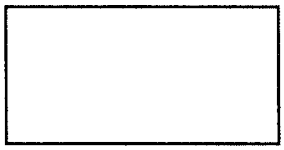
less

RAGS or RICHES?



more

less



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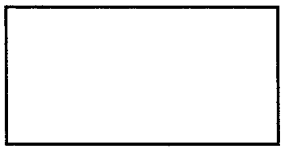

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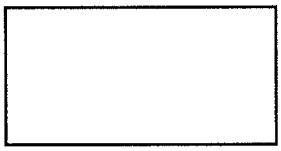
more



less

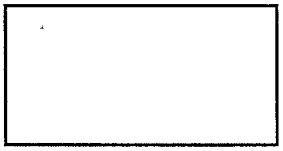
name

RAGS or RICHES?

more

less

RAGS or RICHES?



more

less

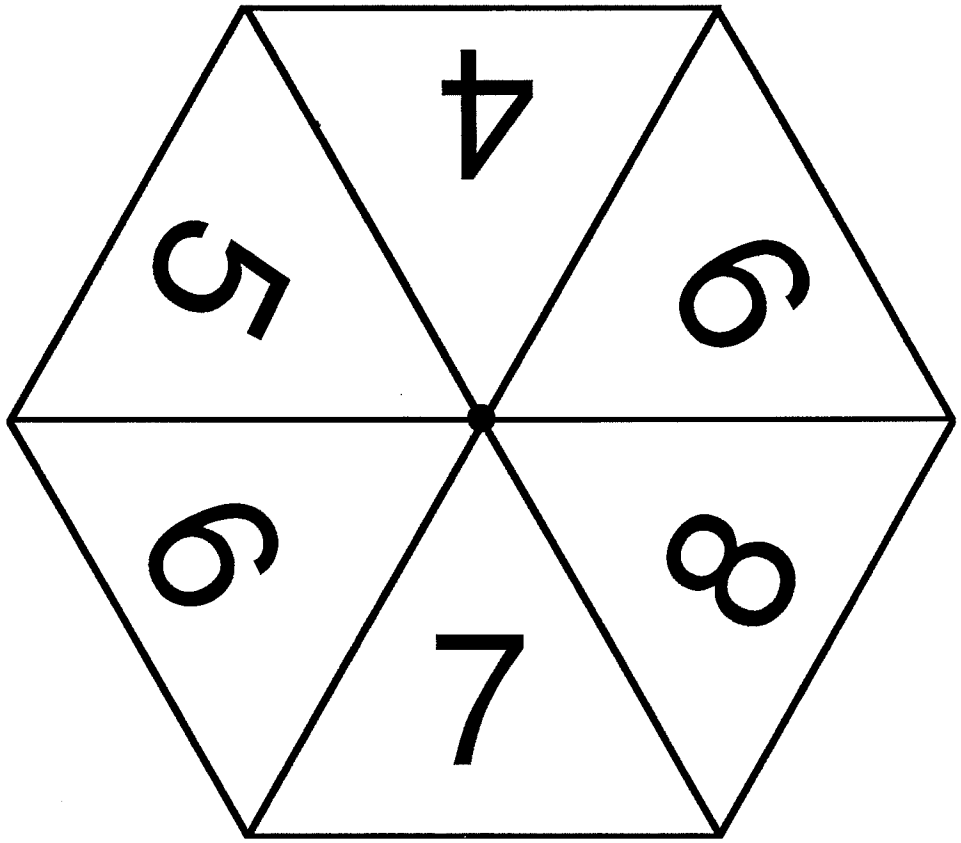
more

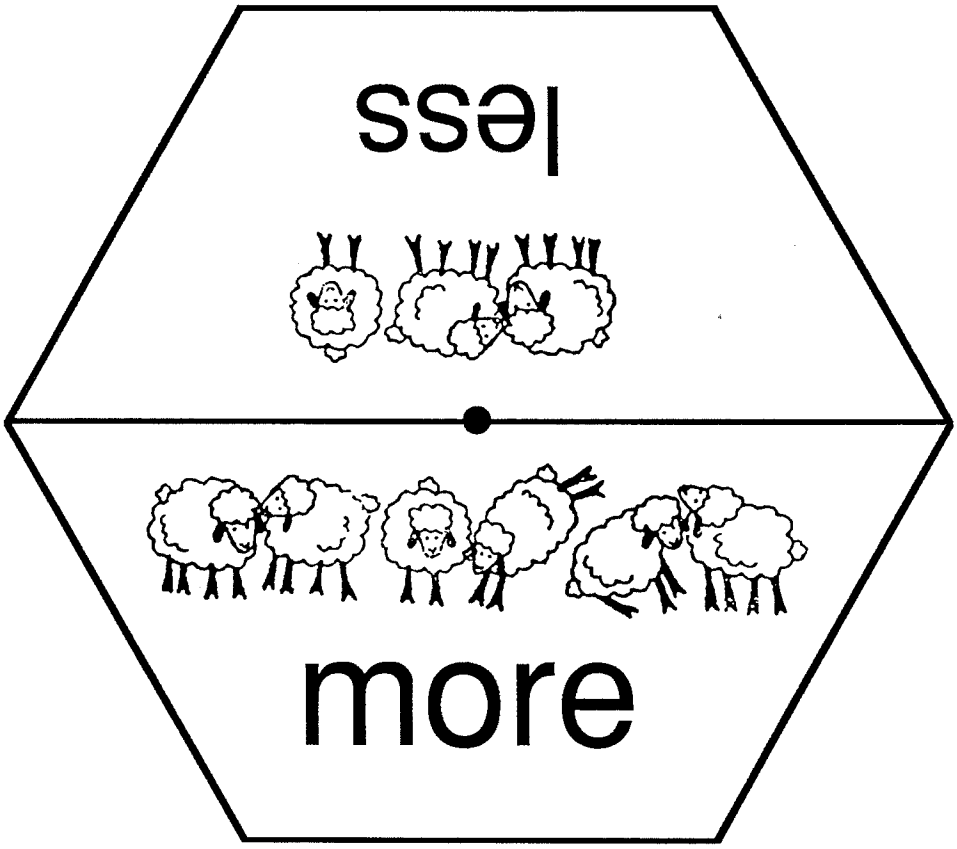
less

more

less

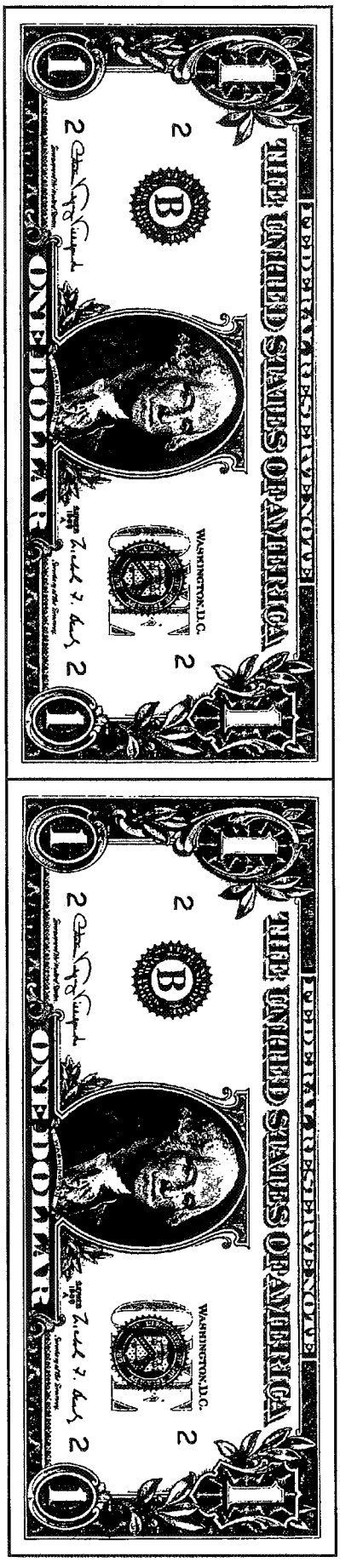
Rags or Riches?
Spinner





Rags or Riches?
Spinner


FEDERAL RESERVE NOTE
THE UNITED STATES OF AMERICA
WASHINGTON, D.C.
ONE DOLLAR

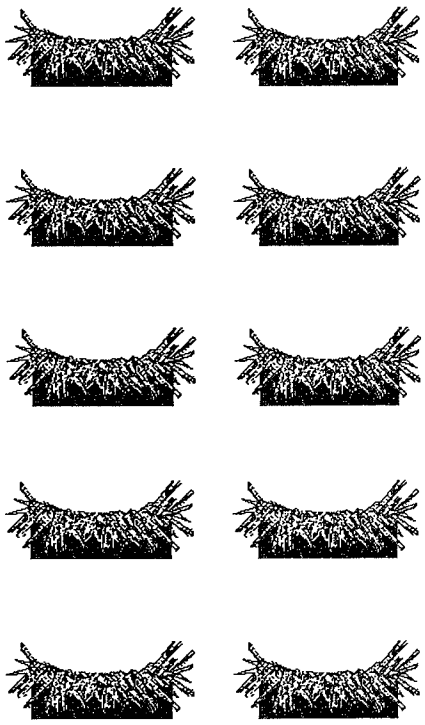

FEDERAL RESERVE NOTE
THE UNITED STATES OF AMERICA
WASHINGTON, D.C.
ONE DOLLAR

MATRIX MADNESS

1						7			10
		13		15				19	
	22				26				30
31			34				38		
				45		47			50
51					56			59	
		63		65		67			
71			74					79	
	82			85			88		
91			94						100

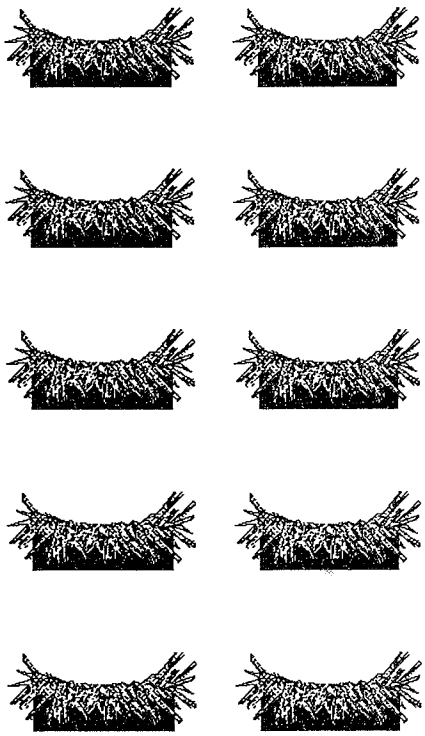
Easter Egg Factory

Hen House



Easter Egg Factory

Hen House



Components

Spaceships

Components

Spaceships

Go for Broke

dimes

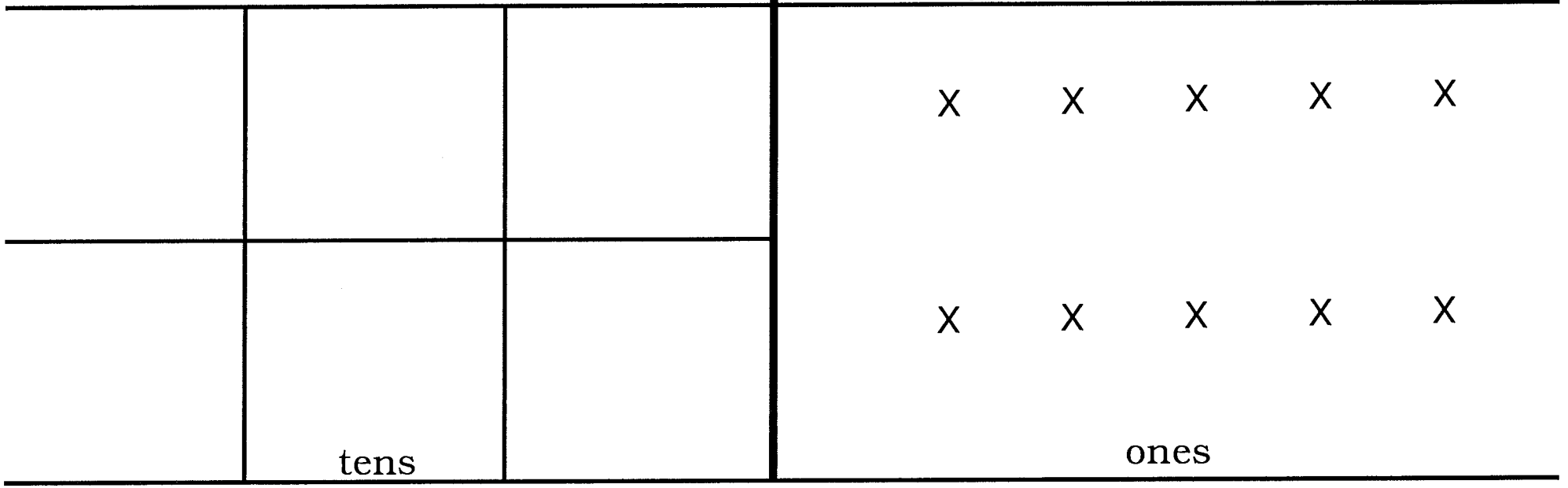
pennies

Go for Broke

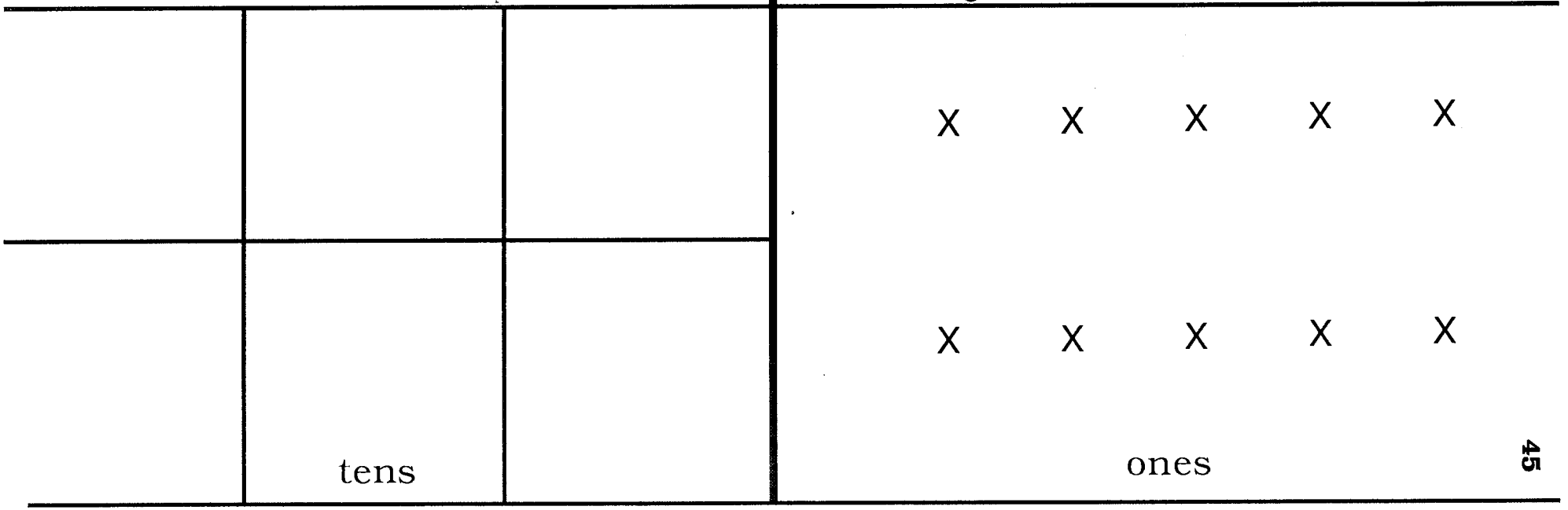
dimes

pennies

Give It Away



Give It Away



Roll, Roll, Roll for

hundreds	tens

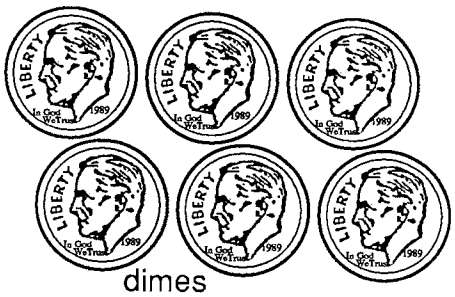
Beans 	 Roll,
ones	hundreds

Roll, Roll for Beans 

tens	ones

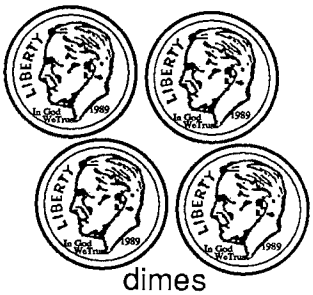
RAGS	or	RICHES
dollars	dimes	pennies

RAGS	or	RICHES
dollars	dimes	pennies


dimes

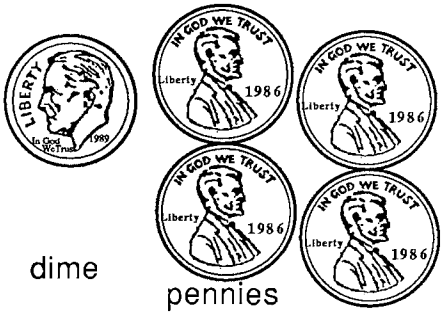

dimes


pennies


dimes


dimes pennies


dimes penny


dime pennies


dime penny

50, 60, 70, ____

6

70

68

50, 60, 70, 80, ____

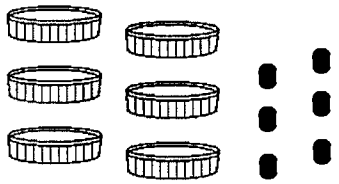
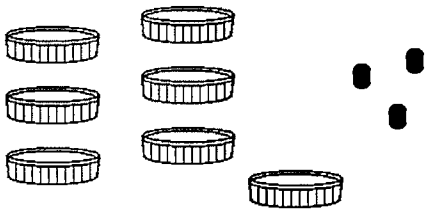
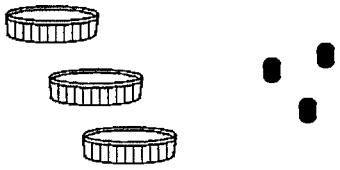
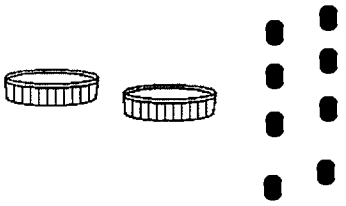
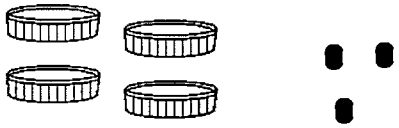
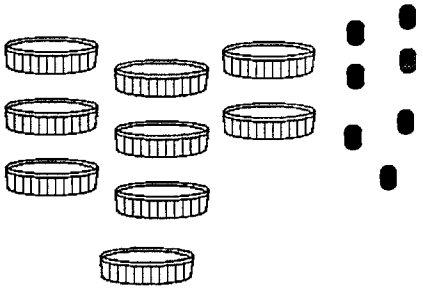
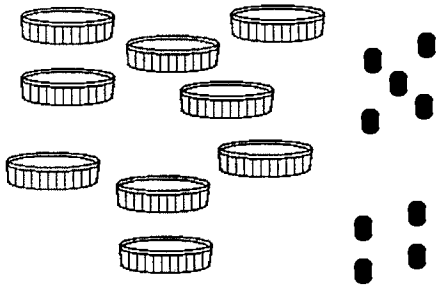
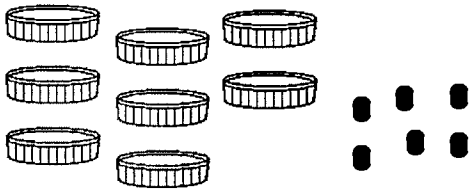
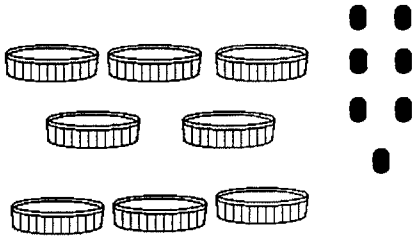
80, 85, 90, ____

40, 45, 50, ____

25, 30, ____

2, 3, 4, ____

14, 15, 16, ____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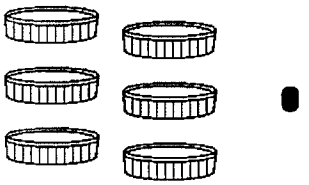
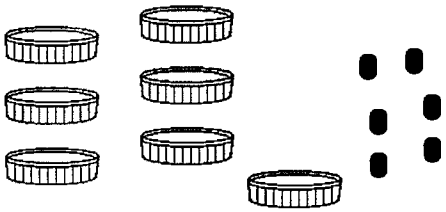
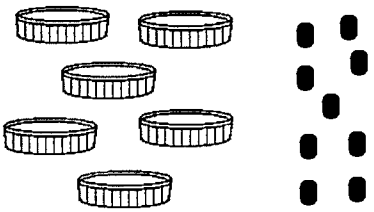
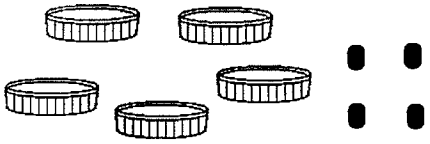
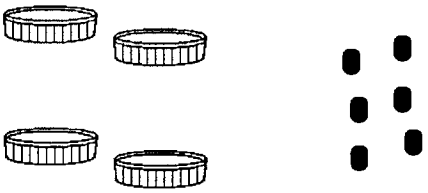
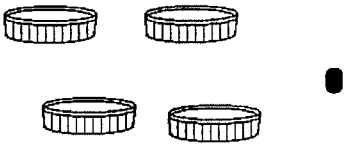
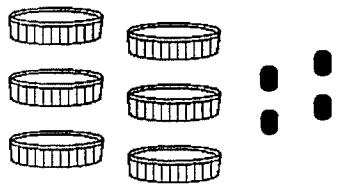
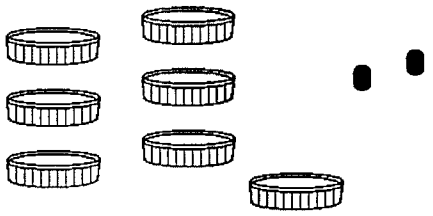
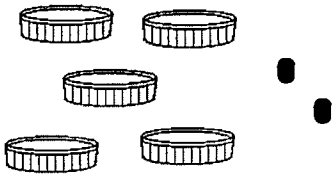
28	**29**	**37**
42	**48**	**58**

		
12	96	92
		
3	84	83
81	16	25
39	49	57

		
77	**78**	**23**
$97 + 1 = \square$	$94 - 1 = \square$	$88 + 1 = \square$
9	**18**	**26**
36	**44**	**53**
62	**75**	

MATRIX MADNESS

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Apply the appropriate labels on both ends of each box lid. Either run the labels on full-sheet Avery Labels No. 5165, cut apart and attach; or simply cut apart these pages and glue or tape on.

Counting Jars

A PRACTICE & ENRICHMENT BOX

Fill and Count

A PRACTICE & ENRICHMENT BOX

Junk Box Counting

A PRACTICE & ENRICHMENT BOX

General Materials Counting

A PRACTICE & ENRICHMENT BOX

Gift Wrap Counting

A PRACTICE & ENRICHMENT BOX

Spin, Count, and Make A Book

A PRACTICE & ENRICHMENT BOX

Beachcomber Trading

A PRACTICE & ENRICHMENT BOX

The Easter Egg Factory

A PRACTICE & ENRICHMENT BOX

Spaceship Factory

A PRACTICE & ENRICHMENT BOX

Go For Broke

A PRACTICE & ENRICHMENT BOX

Give It Away

A PRACTICE & ENRICHMENT BOX

200

A PRACTICE & ENRICHMENT BOX

Unifix Stacks

A PRACTICE & ENRICHMENT BOX

Grand Prix

A PRACTICE & ENRICHMENT BOX

Counting Jars

A PRACTICE & ENRICHMENT BOX

Fill and Count

A PRACTICE & ENRICHMENT BOX

Junk Box Counting

A PRACTICE & ENRICHMENT BOX

General Materials Counting

A PRACTICE & ENRICHMENT BOX

Gift Wrap Counting

A PRACTICE & ENRICHMENT BOX

Spin, Count, and Make A Book

A PRACTICE & ENRICHMENT BOX

Beachcomber Trading

A PRACTICE & ENRICHMENT BOX

The Easter Egg Factory

A PRACTICE & ENRICHMENT BOX

Spaceship Factory

A PRACTICE & ENRICHMENT BOX

Go For Broke

A PRACTICE & ENRICHMENT BOX

Give It Away

A PRACTICE & ENRICHMENT BOX

200

A PRACTICE & ENRICHMENT BOX

Unifix Stacks

A PRACTICE & ENRICHMENT BOX

Grand Prix

A PRACTICE & ENRICHMENT BOX

Roll, Roll, Roll for Beans

A PRACTICE & ENRICHMENT BOX

Rags or Riches?

A PRACTICE & ENRICHMENT BOX

Matrix Madness

A PRACTICE & ENRICHMENT BOX

Roll, Roll, Roll for Beans

A PRACTICE & ENRICHMENT BOX

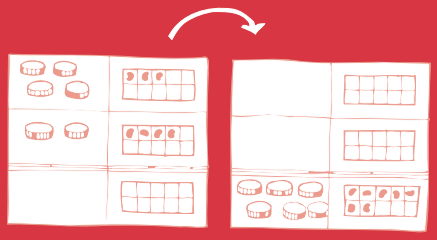
Rags or Riches?

A PRACTICE & ENRICHMENT BOX

Matrix Madness

A PRACTICE & ENRICHMENT BOX

Place Value
addition & subtraction



BOX IT OR BAG IT MATHEMATICS

Practice & Enrichment Boxes

Donna Burk • Allyn Snider
Paula Symonds

Published by The Math Learning Center

Box It or Bag It Mathematics, Practice & Enrichment Box:
Place Value Addition & Subtraction

Box It or Bag It Mathematics consists of:
- Teachers Resource Guide and Blackline Masters, Kindergarten
- Teachers Resource Guide and Blackline Masters, 1st and 2nd Grade
- Practice & Enrichment Boxes:
  - Shapes
  - Introduction to Measuring
  - Understanding Measuring
  - Reading, Writing & Understanding Numerals 0–10
  - Pattern
  - Arithmetic
  - Money
  - Place Value Counting
  - Place Value Addition & Subtraction

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Polishing the Skills

Getting Started

Once you've introduced Place Value concepts through a variety of group lessons (be sure to see Box It or Bag It Mathematics Teachers Resource Guide, *PLACE VALUE COUNTING and PLACE VALUE ADDITION AND SUBTRACTION), you will want children to practice and extend their understanding using the activities that follow in this Packet. Here are a few things we've found helpful for a successful Independent Practice Time.*

Provide no more than 8–12 boxed activities at one time for a class of 30. Too many activities create more than tolerable chaos. Most Boxes are designed to be used by 1–4 children. (While the Place Value Addition and Subtraction set is out, first grade teachers will want to keep some Place Value Counting boxes available for children who may not be ready for adding and subtracting.)

Model each activity thoroughly *until children can tell* you *what to do, step by step. You'll find "box ingredients" and "playing instructions" for each activity in this packet. We use clear Contact paper to put them in our box lids so WE can remember what goes in each box and how each game is played. Reading the directions would be too difficult for most primary children.*

Resist the temptation to put out all your challenging Boxes at once—provide an equal balance of easy and hard. (If you set out too many difficult boxes, all the children will need you at once and the noise level will be almost unbearable as your children try to cope with the stress of too many difficult tasks.)

As you construct these Practice and Enrichment Boxes, cover your box tops with the same design contact paper. In this way you'll be able to easily pull your Place Value Addition and Subtraction boxes off the shelf, even if they've gotten mixed in with other boxes. (Boxes can be ordered from from The Math Learning Center in three sizes: standard (9" X 12" X 2"), half size (9" X 6" X 1-7/8") and junk (4" X 7" X 1-1/8"). See the Box It or Bag It Mathematics Teachers Resource Guide, *MATERIALS INDEX, for additional ordering and making information.*

Remember the Boxes themselves can be used for group instruction. They are ideal for use by an aide or parent with small groups. Many of them can be easily adapted for use with your whole group.

Most of the activities included here were invented, taken to our classrooms, then revised and reworked several times as each group of children taught us more about how they learn and think. We sometimes think we have it "just right" and then find a group of children that needs the activity changed again in some small way. Let your children lead you, too. These activities provide introduction to adding and subtracting large numbers. The children don't need to grasp *these big ideas yet, just experience many opportunities to build future understandings.*

We admit correcting these papers is much harder than correcting workbook pages, but we think our children are experiencing so much more than a workbook would allow. When children are using counters, even if they make lots of mistakes, they have a way of meaningfully correcting their errors. Also, as you watch them work, you catch "break-downs" as they happen and see the reason for them. You may also spot understandings beyond your predictions.

As the children gain experience, many will complete several Boxes daily because they no longer use counters unless they're stuck. However, we leave counters in the Boxes (or accessible in the room) so the children can decide when and if they need to use them.

During Independent Practice Time, it's critical that you be available *and* in circulation *to make sure things go smoothly. Once routines even out, you'll have opportunities to observe individuals which are not afforded when you conduct group instruction. See the next page for some Observation Guidelines.*

Be sure to see the Box It or Bag It Mathematics Teachers Resource Guide, *INTRODUCTION, for more implementation strategies.*

Place Value Addition & Subtraction Observation Sheet

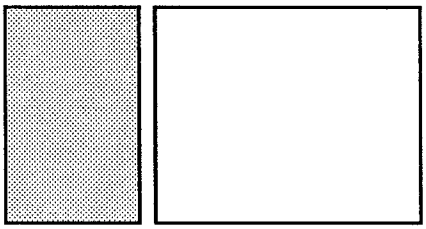
															Children's Names
															Child is able to share materials and work cooperatively
															Child is able to set up counters and solve addition problems.
															Child is able to set up counters and solve subtraction problems.
															Child is able to set up money and solve addition problems.
															Child is able to set up money and solve subtraction problems.
															Child is able to participate in telling, writing, acting and solving place value story problems.

General Making Instructions

PLACE VALUE BOARDS

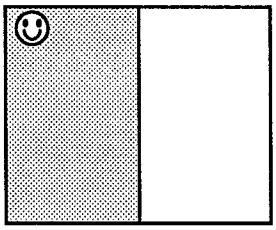
We make ours similar to the ones Mary Baratta-Lorton used in *Math Their Way*. These can be made quickly. You'll need at least 15 for a class of 30.

For each Place Value Board you'll need:
- 9 X 12 tag or railroad board
- 4-1/2 X 9 lavender construction paper



Making Instructions

1. Glue lavender paper on left side of tag or railroad board. Draw a happy face in upper left hand corner so children will know that is the top. They keep the lavender side to the left that way!



2. Laminate or cover with Contact.

PORTION CUPS

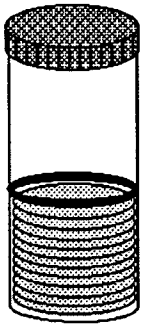
These can be purchased very reasonably from The Math Learning Center. We prefer the 1-oz. shallow kind—they don't tip so easily.

FEELY BOXES

We use tuna cans or cat food cans tucked into the foot of a child's stretchy sock. (These fit easily into our game boxes.) The little sharp edge, where the can opener stops, flattens easily with a hammer.

COIN TUBES

These can be purchased at many dime stores and hobby stores. They are normally sold for coin collectors who want their coins to fit tightly. Therefore, buy the penny-sized tube to hold dimes and the nickel-sized tube to hold pennies. You don't want your coins to fit tightly or they'll get stuck.



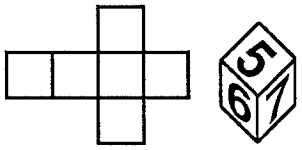
Mark the tube with a Sanford Sharpie line to show how high the coins fill the tube. It's very important, though very expensive, to use real money. We know of teachers who ask their Home and School Club to help with this cost. Twenty dollars won't seem like such a lot to them.

DICE

There are several possibilities.

Wooden dice: (Noisy but durable.) These are available from The Math Learning Center at a very reasonable price. We like the 3/4" size. You can write directly on them with a Sanford Sharpie. We use lots of these.

Railroad board or matte board dice: We either cut ours into 1-1/2" or 2" squares or lay out a dice pattern and score the folds to assemble. We cover ours with clear Contact while they're

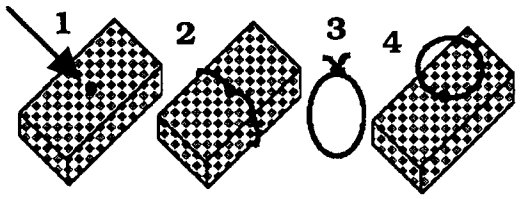


flat. Fold into cube and tape unsealed edges with narrow filament tape. Write on surfaces with a Sanford Sharpie.

BOXES

NOTE: We cover every set of box lids with colored Contact paper and label both ends with the game name. All Arithmetic boxes are one color, all Place Value another color, making for quick identification.

Elastic holders:
We use elastic to hold the lids in place. We like sturdy elastic 1/4" to 3/8" best.



1. Poke a hold in lid top.
2. Cut a length of elastic that fits exactly around box.
3. Tie a knot at ends of elastic.
4. Push loop through hole from underside of box lid, leaving the knot underneath.
5. Slip a large paper clip through the elastic on the underside and secure with filament tape.

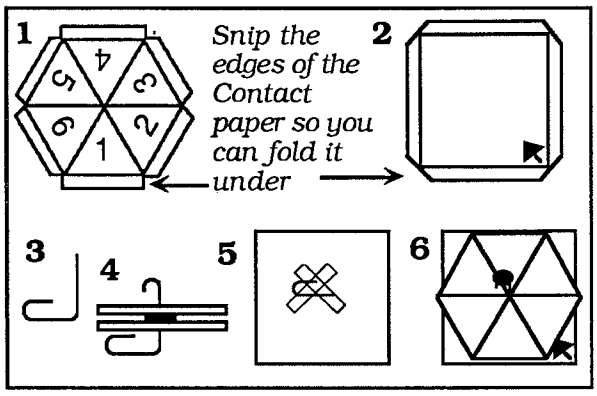
CHALKBOARDS

We couldn't teach without student chalkboards. The Math Learning Center sells black matte board for this purpose. You can use school chalk and felt squares for erasers. Have the children "chalk down" the boards with the side of their chalk before using.

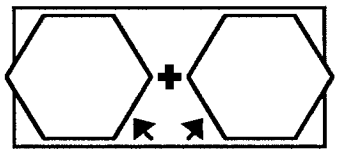
SPINNERS

Single spinner

1. Glue spinner tops to sturdy cardboard. Cut them out and cover tops with clear Contact paper overlapping edges to the underside.
2. For the base, cut a square or rectangle from sturdy cardboard or railroad board. Check spinner top to determine needed size. Cover with clear Contact paper.
3. Straighten out one side of paper clip.
4. Cut two 1-1/2" washers from your cardboard. Assemble as shown. Bend top of paper clip.
5. Tape underside of base to secure paper clip.
6. Use a permanent pen to draw arrow on base at corner. Tape top part of paper clip for safety.

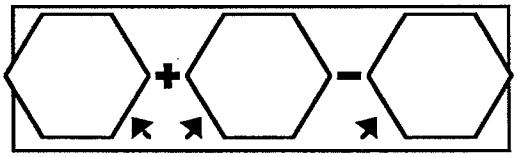


Double spinner
The base needs to look like this:



Be sure to label each spinner with the name of the game to which it belongs.

Triple spinner



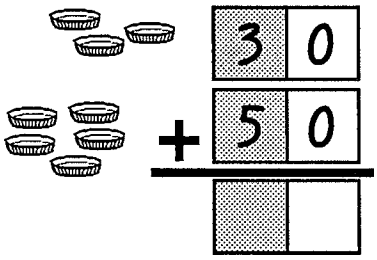
Adding and Subtracting 2- and 3-digit Numbers With No Regrouping

ADD TENS
(addition of 2-digit numbers) 1–4 Children

Box ingredients→ 8 tens dice (marked 00–50)
portion cups and counters (see below)
record sheets
half box for storage

PLAYING INSTRUCTIONS

1. Write your name on a record sheet.
2. Roll 2 tens dice. Record the numbers rolled on your record sheet.
3. Set up your tens with cups and beans.



4. How many do you have altogether? Record the answer on your record sheet.
5. Continue working until your record sheet is finished.

MAKING INSTRUCTIONS

Portion cups and counters
These can be boxed or the children can get them from the general supplies each day. It creates less chaos if everything needed for the game is boxed. If you're going to include your counters, it's good to have them in a small box labeled "Beans for Add Tens". This way they're more likely to end up in the game box at cleanup time.

Dice
Use 1" wooden cubes to make eight dice. Using a Sanford Sharpie, write the numerals—00, 10, 20, 30, 40, 50—on the surfaces of each die .

Record Sheets
Locate Add Tens record sheets in blacklines and run copies.

BIG BUCKS

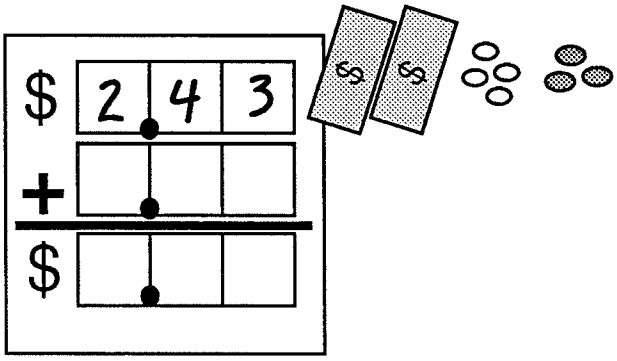
(addition of 3-digit numbers using money) 2–4 Children

Box ingredients→

- ten fake dollar bills
- record sheets
- coin tubes of 30 dimes
- coin tubes of 30 pennies
- two triple spinners
- half box for storage

PLAYING INSTRUCTIONS

1. Write your name on a record sheet.
2. Spin all the wheels on your spinner and set out the dollars, dimes and pennies. Write down the amount of dollars, dimes and pennies you've set out.



3. Spin again and set out the dollars, dimes and pennies indicated. Record how many dollars, dimes and pennies you've set out this time.
4. Combine all of your money to see how much you have altogether. Record your answer.
5. Continue working until you've finished your record sheet.

MAKING INSTRUCTIONS

Triple Spinner

Locate Big Bucks spinner tops in blacklines and make two triple spinners. (See General Making Instructions.)

Fake Dollars

Locate fake dollars blackline and run copies on green paper. Cut apart and place in a tag pocked labeled BIG BUCKS $.

Dimes and Pennies

Fill coin tubes with 30 dimes and 30 pennies. For accountability, mark a fill line on coin tubes with a Sanford Sharpie.

Record Sheets

Locate Big Bucks record sheet in blacklines and run copies. Store money, spinners and record sheets in a half box.

TRIANGLE TOSS

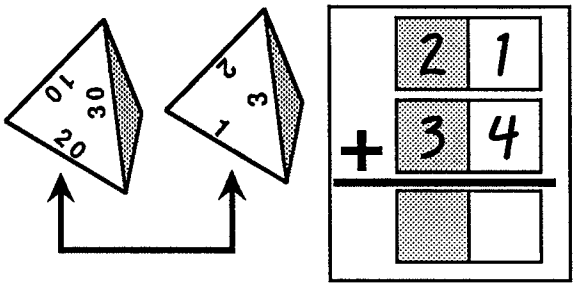
(addition of 3-digit numbers) 1–4 Children

Box ingredients→

- triangle dice
- record sheets
- cups and beans (either in box or easily available in classroom)
- half box for storage

PLAYING INSTRUCTIONS

1. Toss both triangle dice. Read and record. To read triangle dice, the number facing the child and touching the table is the number recorded and built. Example: Read 20 + 1 = 21; build and record 21.



2. Set up cups and beans for the number tossed.
3. Toss again, read and record.
4. Add the ones together and record.
5. Add the tens together and record.

MAKING INSTRUCTIONS

Triangle Dice (4–6 dice)

1. Locate Triangle Toss dice pattern in blacklines. Trace pattern onto matte board.
2. Cut around outside lines and score inside lines *or* cut triangles separately. Assemble dice with narrow filament tape. Label with numerals as shown on pattern.

Record Sheets

Locate Triangle Toss record sheet in blacklines and run copies. Store triangle dice and record sheets in a half box.

SUBTRACT TENS

(subtraction of 2-digit numbers) 1–4 Children

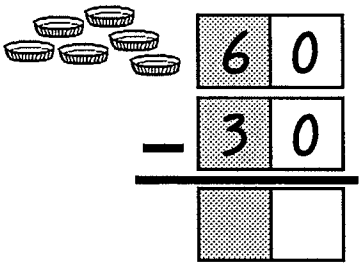
Box ingredients→ double spinners record sheets

half box for storage

portion cups and beans (see below)

PLAYING INSTRUCTIONS

1. Spin the upper spinner wheel. Record the number spun on your record sheet. Set it up with cups and beans.
2. Spin the lower spinner wheel to see how many you need to take away. Record the number spun.

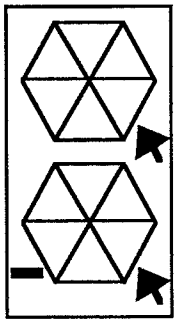


3. Subtract the appropriate quantity and record your answer.
4. Continue working until your record sheet is completed.

MAKING INSTRUCTIONS

Double Spinners

Locate spinner tops blackline for Subtract Tens. Follow assembly directions from General Making Instructions. Be sure to set up the double spinners vertically so they match the record sheet. If four children are using the game, they share spinners.



Record Sheets

Run copies of Subtract Tens record sheet. Store spinners and record sheets in a half box. Portion cups and beans may be stored in box or be readily available in the classroom.

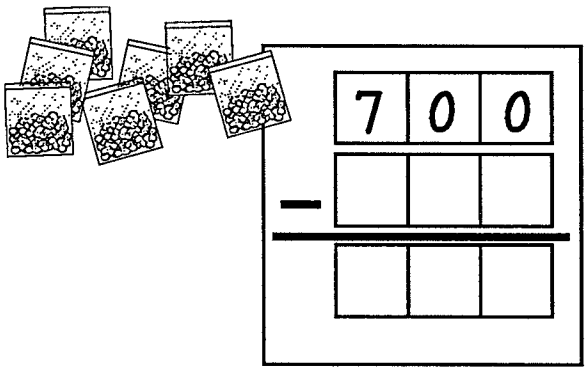
SUBTRACT HUNDREDS

(subtraction of 3-digit numbers) 1–4 Children

Box ingredients→ hundreds bags spinners record sheets standard box for storage

PLAYING INSTRUCTIONS

1. Spin the left spinner wheel. Write down how many hundreds you spun. Set out the hundreds bags.



2. Spin the right side to find out how many hundreds you need to take away. Write down the number spun.
3. Subtract and record your answer.
4. Continue working until your record sheet is completed.

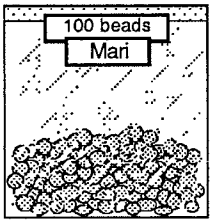
MAKING INSTRUCTIONS

Double Spinners

Locate Subtract Hundreds spinner tops in blacklines. Make two spinners following General Making Instructions.

Hundreds Bags

Have your children bring in one hundred tiny items to bag (rice, beans, old beads, etc.). Seal into sturdy zip-lock bags with filament tape.



Record Sheets

Locate Subtract Hundreds record sheet in blacklines and run copies. Store record sheets, hundreds bags and spinners in standard box.

NOTE: If you are a first grade teacher and don't want to teach regrouping, the following activities can be made so no regrouping is involved by pricing the items appropriately.

Addition

- *Eating Out*
- *The Store*
- *Toy Shop*

Subtraction

- *On Sale*

These activities can also be made with no regrouping:

- *Add, Tell, Spin and Win*
- *Subtract, Tell, Spin and Win*

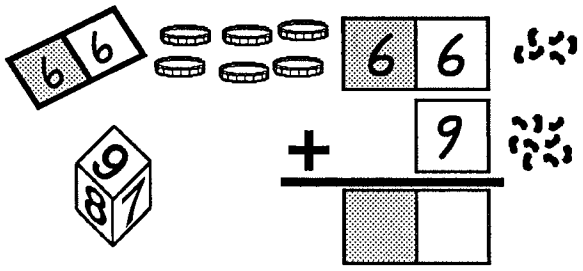
Adding and Subtracting—Possible Regrouping

FEELY BOX ADDITION
(adding a 2-digit number and 1-digit number with regrouping)

Box ingredients→ two dice Feely Boxes
record sheets half box for storage
portion cups and beans (see below)

PLAYING INSTRUCTIONS

1. Reach in the Feely Box to get your starting number.
2. Write that number on your record sheet in the upper double box and set it up with cups and beans.
3. Roll the die and write the number you rolled in the single box. Set that number up with beans.

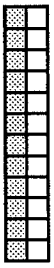


4. Read your problem. Check to see that you set it up correctly.
5. Move the beans on the ones side down under the equals line.
6. Count your beans. Do you have ten or more? If so, make a new cup. Put that new cup above your others and don't forget to record the new cup on your record sheet above the numbers on the tens side.
7. Move your cups down under the equals line. Don't forget the brand new cup! Count your cups and beans. Record the total.
8. Keep working until you finish your record sheet.

MAKING INSTRUCTIONS

Feely Boxes
See General Making Instructions. Make two boxes to be shared.

Feely Box Cards



1. Cut two pieces of manilla tag 2 X 12.
2. Cut two pieces of lavender construction paper 1 X 12.
3. Using a glue stick, glue construction paper strip to left side of tag.
4. Using a pencil, divide your strips into 1" sections.
5. Write in the following numbers:

16	26	36	46	56	66
17	27	37	47	57	67
18	28	38	48	58	68
19	29	39	49	59	69

6. Contact or laminate and cut apart.
7. Put 12 cards in each Feely Box.

Dice
Make two dice to share using 3/4" wooden cubes. Write the numerals 4–9 on the surfaces.

Record Sheets
Run copies of Feely Box Addition record sheets and store them in half box with dice and Feely Boxes. Be sure to have beans and cups in an easily accessible area of the room.

SPIN AND SPIN AGAIN

(adding 2-digit numbers with possible regrouping) 1–4 Children

Box ingredients→ double spinners record sheets

half box for storage

cups and beans (see below)

PLAYING INSTRUCTIONS

1. Spin both sides of the spinner.
2. Read and record your spin. Set it up with cups and beans.
3. Spin again.
4. Record your spin and set it up.
5. Does it look like you have enough beans on the ones side for a brand new cup? If so, work on the ones column first. Move your counters down. Count. Do you need to make a brand new cup? If so, make it and set it above your other cups. Don't forget to write it down.
6. Add up your cups. Don't forget any new ones you made. Count all your cups and beans. Record the total.
7. Keep working until you finish the record sheet.

MAKING INSTRUCTIONS

Spinners

Locate Spin and Spin Again spinner tops for two double spinners in blacklines. See General Making Instructions for construction help.

Record Sheets

Locate Spin and Spin Again blacklines and run copies. Store record sheets and spinners in a half box. Be sure to have cups and beans either in the box or an easily accessible area.

EATING OUT

(adding 2- and 3-digit numbers with possible regrouping using money) 1–2 Children

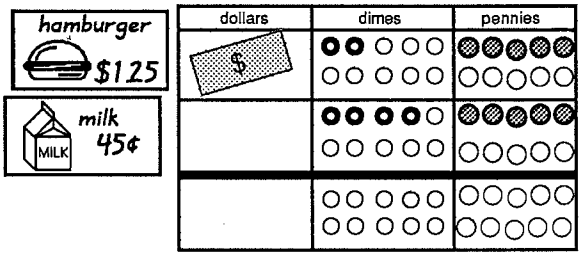
Box ingredients→ fake dollars, dimes, pennies

two addition boards food cards

record sheets half box for storage

PLAYING INSTRUCTIONS

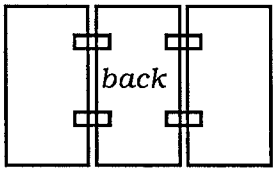
1. Choose a card of food you'd like to order in a restaurant.
2. Read the price and set up that amount in dollars, dimes and pennies on your addition board. Write it down on your Eating Out record sheet.
3. Choose another food item, read the price, set out the money and write it down on your record sheet.

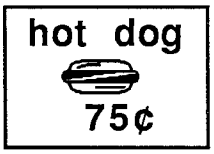


4. How much will your restaurant bill be? Does it look as if you'll have ten pennies or more? Ten dimes or more? If so, start with the pennies to add it up. Do you need to make any trades? How much did your food cost? Record the total amount. Don't forget your dollar signs and decimal points.

MAKING INSTRUCTIONS

Addition Boards
Locate Eating Out addition boards in cardstock. Lightly color dimes and pennies. Laminate and trim. Hinge on the back side with filament tape so they store easily in a half box.





Food Cards
Cut tag into 5 X 8 rectangles. Cut pictures of food from magazines. Use your glue stick to mount pictures on cards. Label and price each card. (Keep the prices as realistic as possible.) Laminate cards.

Money
Locate fake dollars blacklines. Run copies on green paper and trim. Store in tag pocket labeled with game name. Put 25 dimes and 25 pennies in coin tubes and mark fill line with a Sanford Sharpie. (See General Making Instructions.)

Record Sheets
Locate Eating Out record sheet and run copies. Store money, addition boards, food cards and record sheets in a half box.

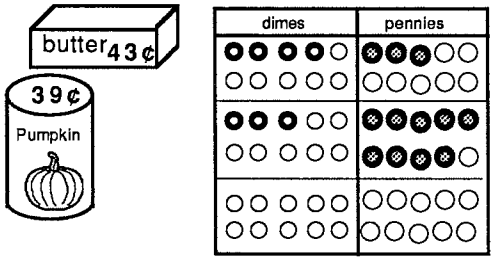
THE STORE

(adding 2-digit numbers with possible regrouping using money)
1–4 Children

Box ingredients→ fake dollar bills, dimes and pennies
food items
addition boards
record sheets
standard box for storage

PLAYING INSTRUCTIONS

1. Get out a record sheet and addition boards.
2. Choose an item of food to buy. Read the price. Set out the needed money on your addition board. Write it on your record sheet.
3. Choose another food to buy. Again, set out the money and record it on your record sheet.



4. How much will it cost altogether? Does it look like you'll have ten or more pennies? Ten or more dimes? If so, start with your pennies to see how many you have. Continue adding until you figure out how much your foods cost. Record the total on your record sheet.
5. Continue working until you complete your record sheet.

MAKING INSTRUCTIONS

Food Items
If you have a large toy store nearby, purchase a set of the tiny play food packages. You can get a package of 18–20 items for about $6.00. To make these more durable, remove can lids and stuff with paper towels. Glue lids back in place. (A hot glue gun is great for this.) The small boxes can also be stuffed to make them more durable. If you can't locate the tiny food containers, buy (or have children bring) an assortment of small grocery items. Store these in a sturdy box or grocery bag. Price and label items so children can easily read them. (Gummed labels are a fast way to label.)

Addition Boards
Locate The Store addition boards in cardstock section. Lightly color the dimes and pennies. Laminate and trim.

Money
Locate fake dollars blacklines and run on green paper. Trim and store in a labeled tag pocket. Store 35 dimes and 35 pennies in coin tubes. For accountability, mark fill line with a Sanford Sharpie.

Record Sheets
Locate The Store record sheet in blacklines and run copies. Store tiny food items, money, addition boards and record sheets in a standard size box.

THE TOY SHOP

(adding 2-digit numbers with possible regrouping using money)
1–4 Children

Box ingredients→ fake dollars, dimes and pennies

toys

addition boards

record sheets

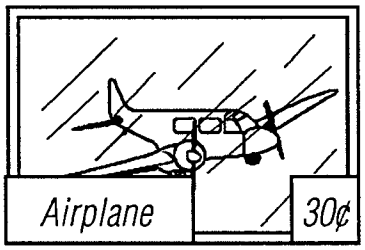
standard box for storage

PLAYING INSTRUCTIONS

1. Get a record sheet and an addition board.
2. Find a toy you'd like to buy. Read the price and set out the appropriate money on your addition board. Write the name of the toy and its price on your record sheet.
3. Choose another toy, set out the money and write it all on your record sheet.
4. How much will it cost altogether? Does it look like you'll have ten or more pennies? Ten or more dimes? If so, be sure to start adding by counting all your pennies first, then your dimes. Do you need to trade 10 pennies for a new dime? Do you need to trade 10 dimes for a dollar?
5. Count up the total money you've spent and record the answer on your record sheet.
6. Continue working until you finish your record sheet.

MAKING INSTRUCTIONS

Toys
Select 15 or more small, inexpensive toys. Package each toy in a plastic bag and secure with filament tape. (This makes taking toys home much less tempting.) Label package with toy name and price.



Addition Boards
Locate the Toy Shop addition boards. Color dimes and pennies lightly with silver and brown crayons. Contact or laminate.

Money
Locate fake dollars blackline, run on green paper and store in a tag pocket labeled Toy Shop.

Record Sheets
Locate Toy Shop record sheet in blackline and run copies. Store money, toys, addition boards and record sheets in a standard box.

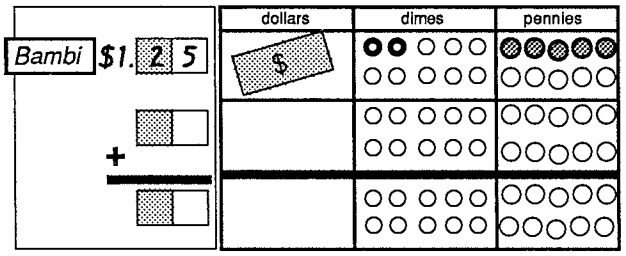
BOOK ORDER ADDITION

(adding 2- and 3-digit numbers with possible regrouping using money)
1–4 Children

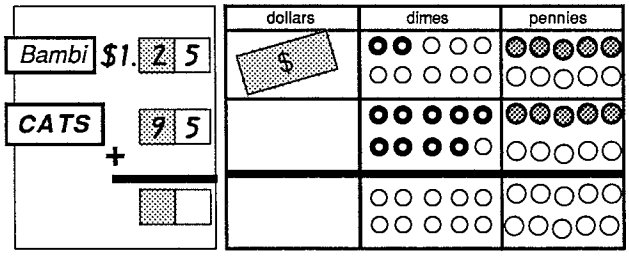
Box ingredients→ addition boards
Book Order packs
record sheets
glue stick or roll-on glue
fake dollar bills, dimes and pennies
standard box for storage

PLAYING INSTRUCTIONS

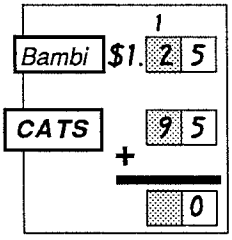
1. Choose a book you'd like to buy and glue that book slip on your record sheet.



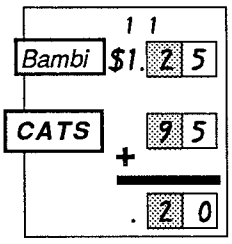
2. Write its price and lay out the needed money on your addition board.
3. Choose a second book to buy and glue that book slip on your record sheet.
4. Lay out the needed money on your addition board.



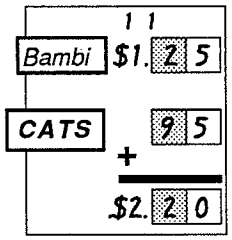
5. Move all your pennies to the answer section of your board. Do you have ten or more? If so, trade for a dime and set it above the dimes on your addition board.
6. Be sure to adjust your record sheet to show exactly what you have now.



7. Add up your dimes. Do you have ten or more? If so, trade for a dollar. Be sure to adjust your record sheet to show exactly what you did.



8. Add up your dollars and record the total.



9. Continue working until you complete the record sheet.

MAKING INSTRUCTIONS

Book Order Slips

Cut apart a Scholastic or Troll order book so that you end up with a stack of 30 of each book. Staple onto a piece of tag. If price isn't on book description, write it on the back of the tag. Children will pull off the top slip from the pack each time as they order.

Addition Boards

Locate Book Order addition boards. Color coins lightly with silver and brown crayons and laminate or Contact.

Money
Locate fake dollars blackline and run on green paper. Trim and store in a tag pocket. You'll need 30 pennies and 30 dimes stored in coin tubes. Mark fill lines with a Sanford Sharpie.

Record Sheets
Locate Book Order Addition record sheet in blacklines and run copies. Store book order packs, money, addition boards and record sheets in a standard box.

Glue
It's nice to include a roll of glue or glue stick but paste would be OK, too.

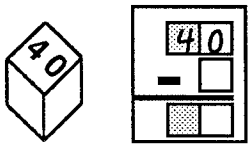
TENS MINUS LESS

(subtracting a 1-digit number from a 2-digit number with regrouping)
1–4 Children

Box ingredients→ dice (tens and ones) counters and portion cups record sheets half box for storage

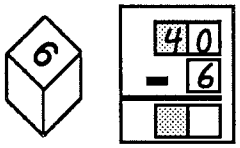
PLAYING INSTRUCTIONS

1. Roll the tens die.
2. Write down the number rolled in your top box.

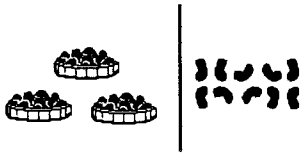


3. Set it up with cups and counters.

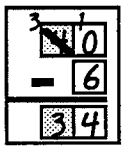
4. Roll the ones die.
5. Write down how many you have to take away.
6. Read the ones side of your problem. Do you need to dump a cup?



7. If so, get one of your cups and dump it out on the ones side. Write down what you did.



8. Take away the number your problem says. Be sure to count carefully.
9. Record how many are left in the ones box in the answer space.



10. Do the cups side now.
11. Continue working until you have finished your record sheet.

MAKING INSTRUCTIONS

Dice
You'll need 4 tens dice and 4 ones dice. They should read:

20, 30, 40, 50, 60, 70
4, 5, 6, 7, 8, 9

We often use the 1" wooden cubes for tens and the 3/4" wooden cubes for ones.

Counters and Cups
It's nice to include these in your box, also. You'll need about 20 cups and a small box of macaroni or beans.

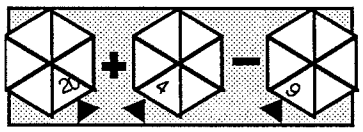
Record Sheets
Locate Tens Minus Less record sheets in the blacklines and run copies. Store dice, cups and beans, and record sheets in half box.

TRIPLE SPIN TAKE AWAY
(subtracting a 1-digit number from a 2-digit number with possible regrouping) 1–4 Children

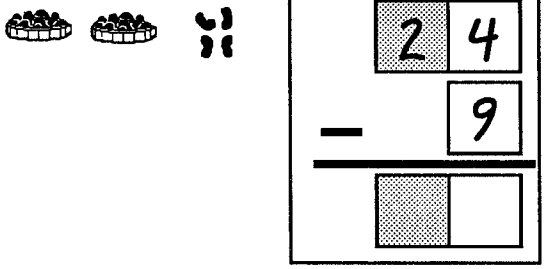
Box ingredients→ two triple spinners record sheets
beans and portion cups half box for storage

PLAYING INSTRUCTIONS

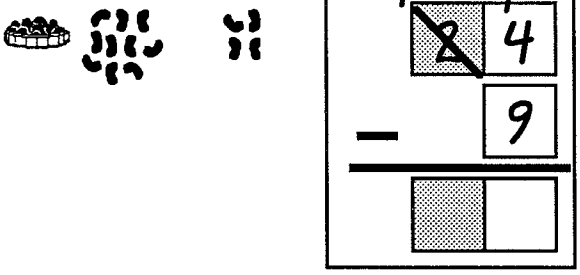
1. Spin all three spinner tops and read your problem.



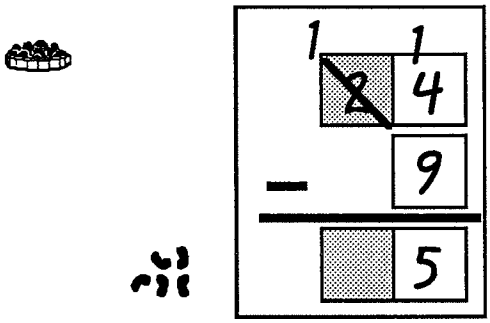
2. Write your problem on your record sheet and set it up with cups and beans.



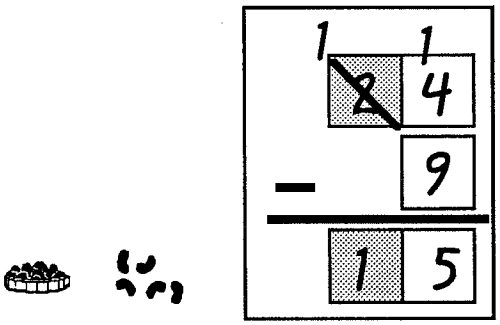
3. Read your problem. Do you need to dump a cup? If so, dump it and then adjust your record sheet to show exactly what you now have.



4. Subtract the number indicated on the ones side. Record the beans you have left.



5. Read your cups side. Do you need to subtract? If not, record the cups you have left.



6. Continue working until your record sheet is complete.

MAKING INSTRUCTIONS

Triple Spinners (2)
Locate Triple Spin Take Away spinner tops in blacklines and assemble. (See spinner instructions in General Making Instructions.)

Portion Cups and Counters
This activity will need about 12 cups and a small box of counters.

Record Sheets
Locate Triple Spin Take Away record sheets in blacklines and run copies. Store spinner, cups, counters and record sheets in half box.

TRADE TO SUBTRACT

(subtraction of 2-digit numbers with possible regrouping) 1–4 Children

Box ingredients→ counters (shell macaroni is nice) and portion cups

"cups dice" and "macaroni dice"

Feely Box

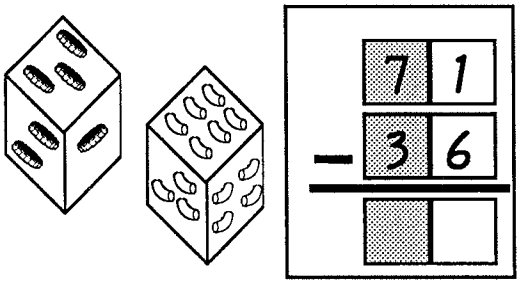
Feely Box cards

record sheets

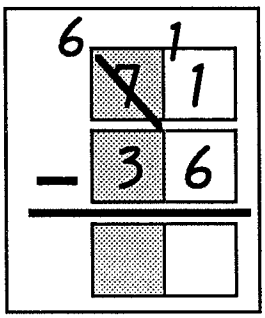
standard box for storage

PLAYING INSTRUCTIONS

1. Select a card from the Feely Box.
2. Write that number in the top box of your record sheet.
3. Set out that number in cups and macaroni.
4. Roll the cups and macaroni dice. Write down the number rolled to indicate how many you'll take away.



5. Read your whole problem now. Then read just the ones side.
6. Do you need to dump a cup? If so, be sure to record what your cups and macaroni look like after you've dumped the cup.



7. Take away the needed macaroni from the ones column. Record the remaining macaroni.
8. Read the cups side of your problem.
9. Subtract and record the remaining cups.
10. Finish your record sheet.

MAKING INSTRUCTIONS

Feely Box

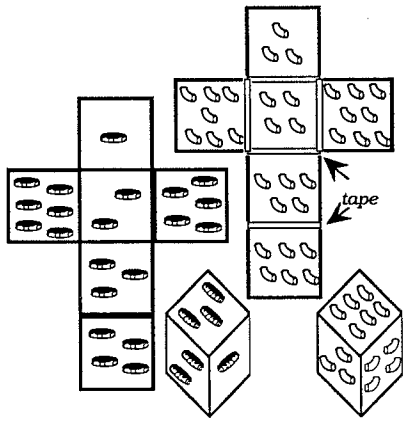
You'll need one box to be shared. See General Making Instructions.

Feely Box Cards

1. Cut two strips of tag, 2 X 12. Cut two strips of lavender construction paper, 1 X 12.
2. Glue the construction paper down the left side of tag.
3. Mark off into 1" sections with a Sharpie pen.
4. Write in the numerals 69 to 93.
5. Laminate or Contact on both sides so cards will be sturdy.
6. Cut apart and put in Feely Box.

Cups and Macaroni Dice

1. Cut matte board into twelve 1-1/2" squares or cut out shape below and score inside edges to fold. Draw cups and macaroni as shown: 1–6 on cups dice, 3–8 on macaroni dice.
2. Assemble with narrow tape on edges. Cover with Contact. Fold into box form and tape.



Counters and Cups

You'll need about 30 cups and a small box of macaroni.

Record Sheets

Locate Trade to Subtract in blacklines and run copies. Store dice, Feely Box, cups and macaroni along with record sheets in a standard box.

ON SALE

(subtraction of 1- and 2-digit numbers from a 2-digit number with possible regrouping using money)

NOTE: Be sure to introduce this game with the large group lesson for On Sale in the *Box It or Bag It Mathematics Teachers Resource Guide, First and Second Grade,* pages 249–251.

Box ingredients→ toys or foods labeled with name and price

coin tubes of dimes and pennies

Feely Box

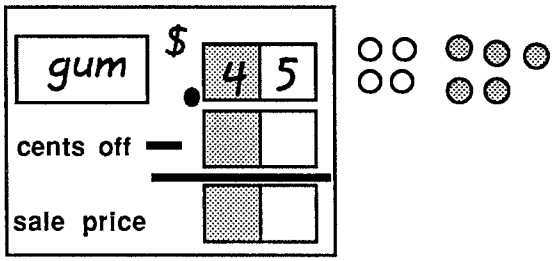
On Sale cards

record sheets

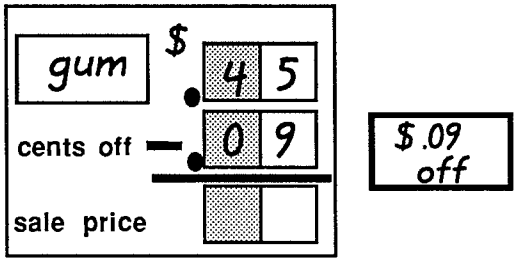
standard box for storage

PLAYING INSTRUCTIONS

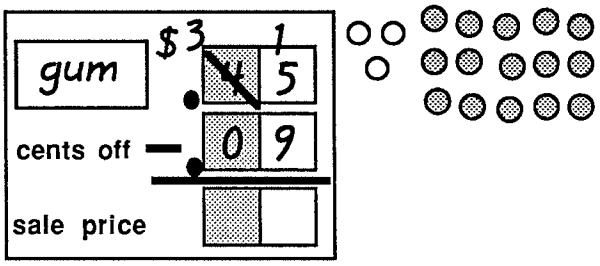
1. Choose an item to buy. Write its name and price on your record sheet.
2. Set out the correct amount of money.



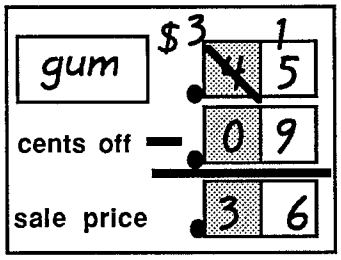
3. Your chosen item is "on sale" today. Reach into the Feely Box to find out how many cents off you get. Record that amount on your record sheet.



4. Read your problem. Now read just the ones side. Do you need to trade a dime for ten pennies in order to subtract? If so, do it now and then write down exactly what you have.



5. Subtract and record your answer.



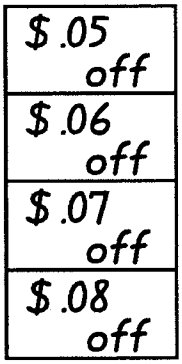
MAKING INSTRUCTIONS

Feely Box

See General Making Instructions.

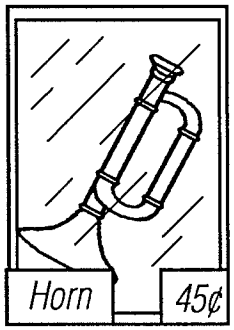
On Sale Cards

Cut two pieces of tag, 2 X 10. Divide into 1" sections with a pencil. Write "cents off" amounts on each card beginning with $.05 off and continuing to $.25 off. Contact or laminate on both sides so cards will be sturdy. Cut apart.



Etc.

Toys or Food



Shop for small items that are priced $.29 to $.89. We have found it best to seal these items in plastic bags with filament tape. They last much longer. You need at least 12 items. Label each item with name and price on a gum label.

Coins
You'll need 30 dimes and 30 pennies in coin tubes. See General Making Instructions.

Record Sheets
Locate On Sale record sheets in blacklines and run copies. Store toys and/or food, money, Feely Box of On Sale cards and record sheets in a standard box.

NOTE: This game can be renewed by changing the items to buy in your box.

Polishing the Skills

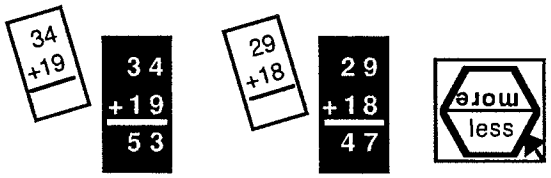
These activities contain new challenges as well as review. We've tried to arrange them in the packet by degree of difficulty. We have had a few first graders and most second graders use all of these activities. Once again, by controlling your numbers, the degree of difficulty can be decreased or increased for each game.

ADD, TELL, SPIN AND WIN
(adding 2-digit numbers with possible regrouping and comparing sums)
2 Children

Box ingredients→ mini chalkboards, chalk and erasers
game cards
more/less spinner
half box for storage

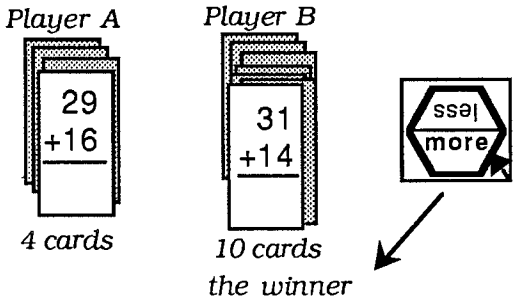
PLAYING INSTRUCTIONS

1. Shuffle the stack of game cards. Set them face down in a pile on the table.
2. Each partner takes a card, writes and solves the problem on his or her chalkboard.
3. Each player checks the other person's work for accuracy. If a mistake has been made, it is corrected.
4. The more/less spinner is spun to determine winner of this turn.



the winner

5. The winner collects both players' cards and a new turn is begun.
6. When players finish the deck of cards or tire of playing, each player's winnings are counted and spinner is spun to determine game winner.



MAKING INSTRUCTIONS

Cards (make 20 cards)

Easy: These could be made as a set of no regrouping cards. Just don't let your ones and tens numerals go beyond four.

11	20	30	40
12	21	31	41
13	22	32	42
14	23	33	43
	24	34	44

Harder: There could also be cards that require regrouping every time or only some of the time. If you want all regrouping, your ones digit would always be 5–9 and the tens digits 1–4.

Spinner

Locate the more/less spinner top for Add, Tell, Spin and Win in blacklines. Construct according to General Making Instructions.

Chalkboards

Cut a student chalkboard in half to create two tiny boards. The children love having the miniature kind in the box along with an eraser and pieces of chalk. Store chalkboards, spinner and task cards in half box.

SUBTRACT, TELL, SPIN AND WIN

(subtracting a 1- or 2-digit number from a 2-digit number with possible regrouping—comparing differences)

Box ingredients→ mini chalkboards, chalk, eraser

game cards more/less spinner

half box for storage

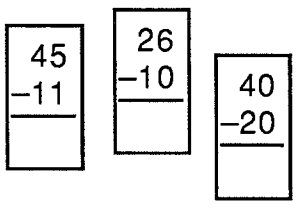
PLAYING INSTRUCTIONS

1. Shuffle the game cards. Set them in a stack face down.
2. Each partner takes a card, writes and solves the problem on his or her chalkboard.
3. Each player checks the partner's work for accuracy. If a mistake has been made, it is corrected.
4. The more/less spinner is then spun to determine the winner of this turn. The winner takes both cards and a new turn is begun.
5. Play continues until the deck is complete or players tire of game.
6. Each player then counts cards he or she has won and the spinner determines the winner.

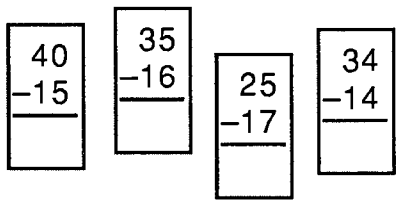
MAKING INSTRUCTIONS

Problem Cards

Easy: Make 20 cards with subtraction problems that don't require regrouping.



Hard: Make 20 cards with subtraction problems that *often* require regrouping.



Spinner

Locate the more/less spinner top for Subtract, Tell, Spin and Win in blacklines and construct as in General Making Instructions.

Chalkboards

Cut two mini chalkboards from a student chalkboard. Add pieces of chalk and an eraser. Store problem cards, mini chalkboards, chalk and eraser, plus the more/less spinner in a half box.

RACE TO 100

(Adding from 00 to 100 or lots more. Each year a few of our children have reached several thousand by taping record sheets together.)

Box ingredients→ tens dice and ones dice counters in tens and ones

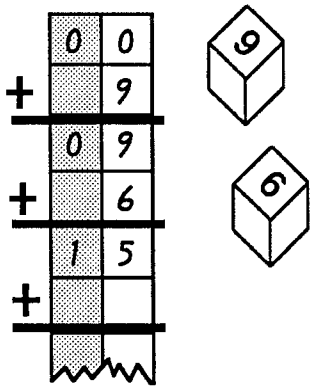
record sheets standard box for storage

NOTE: This is a bear to correct but truly worth the time. We've had children borrow dice overnight and complete two or three record sheets for fun. Their joy is wonderful! Many quit using counters by the time they pass 200.

PLAYING INSTRUCTIONS

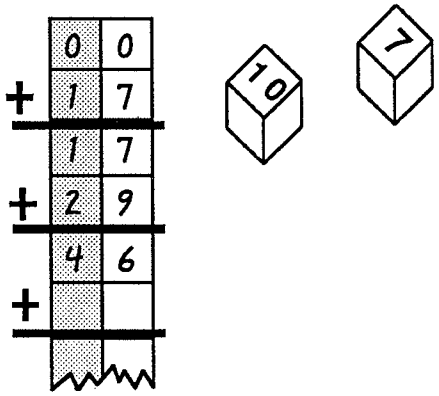
Easier

1. Trace the 00 at the top of the record sheet.
2. Roll your ones die, set out counters and record.
3. Continue rolling and recording until you reach 100.



Harder

1. Trace 00 at the top of the record sheet.
2. Roll your tens die and ones die. Set out appropriate counters.
3. Add and record your work.
4. How high can you go? Tape on additional sheet if needed.



MAKING INSTRUCTIONS

Dice

Easy version: Make six dice labeled 4–9.

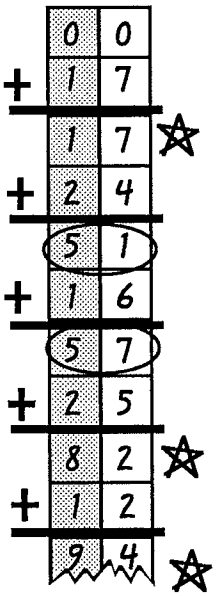
Harder version: Make six dice labeled 4–9 and six dice labeled with 10, 20, 30, 10, 20, 30. We like to use 1" wooden cubes for our tens and 3/4" wooden cubes for the ones.

Record Sheets

Locate Race to 100 record sheet in blacklines and run copies.

NOTE: The hardest part of this game is learning to use the record sheet. Use the easy dice and do a directed group lesson; model the recording on the chalkboard so the children can see how to do it.

When we correct these, it looks like the illustration on the right.



Counters

Beans and cups work well for this game. Store counters, dice and record sheets in standard box.

GRAND PRIX

(addition of 2-digit numbers with possible regrouping) 2 Children

Box ingredients→ four or more Hot Wheels or Matchbox cars

measuring tape (such as used for sewing) in centimeters or inches

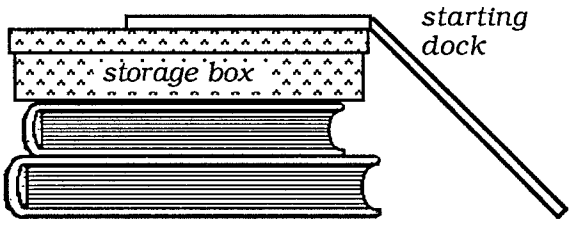
starting dock

record sheets

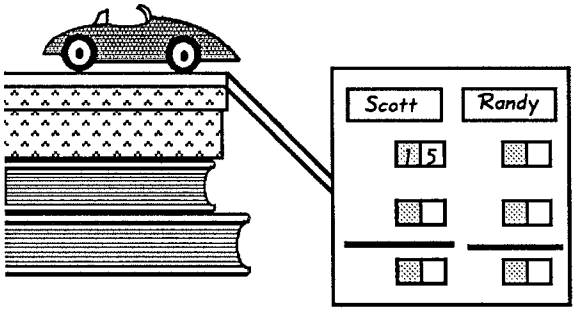
half box for storage

PLAYING INSTRUCTIONS

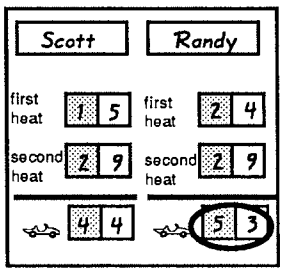
1. Set up the race track with books underneath.



2. Get a record sheet to share with your partner.
3. Set your race car on the "go" arrow and give it a gentle push.



4. Use your tape measure to measure the distance rolled. Record the number on your record sheet.
5. Now your partner gets a turn and then you each take a second turn.
6. Add your heats. Check each other to be sure your addition is correct.
7. The player with the higher total wins! Circle the winner.

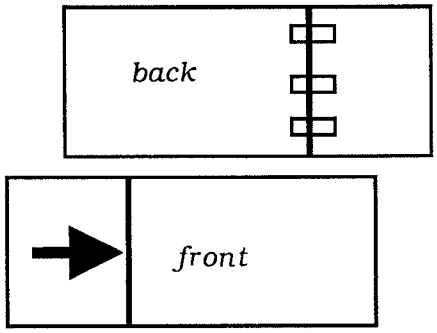


NOTE: Many children need cups and beans to accurately add their heats. Be sure those materials are easily accessible.

MAKING INSTRUCTIONS

Starting Dock

Cut a piece of matte board 5 X 7 and a second piece 4 X 5. Cover with clear Contact paper. Use a Sanford Sharpie to draw a starting arrow.



Measuring Tape

Look around your school for a centimeter measuring tape or use a sewing tape from a fabric store.

Cars

Select several Hot Wheels or Matchbox cars to include in your box.

Record Sheets

Locate Grand Prix record sheet in blacklines and run copies. Store cars, starting dock, measuring tape and record sheets in half box.

CATALOG ADDITION

(addition of 3-, 4-, and 5-digit numbers using money) 2 Children

Box ingredients→ cut and priced catalog pictures

record sheets

dimes and pennies in coin tubes

fake dollar bills, ten dollar bills, and hundred dollar bills

addition boards

half box for storage

NOTE: For children who have become experts at 2-digit addition and subtraction, this is a wonderful activity.

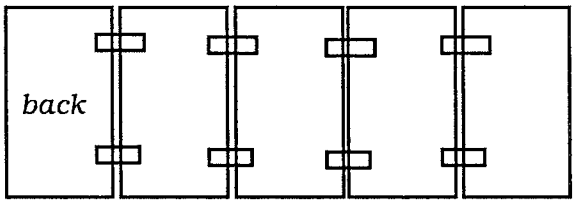
PLAYING INSTRUCTIONS

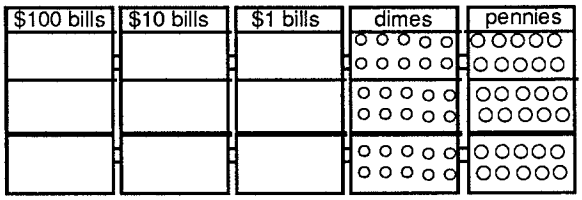
1. Choose an item to buy and write the name and price on your record sheets.
2. Set up the needed money on your addition board.
3. Choose a second item to buy, write its name and price, and set up the money.
4. Begin with your pennies to find your totals. Make money trades and record those trades wherever needed.
5. Keep working until you complete your record sheet.

MAKING INSTRUCTIONS

Addition Boards

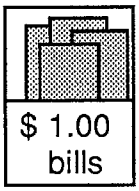
1. Find tagboard Catalog Addition boards in blacklines.
2. Cut pieces apart and arrange as in drawing.
3. Color pennies and dimes with crayon. (It really helps the children.)
4. Laminate or Contact.
5. Hinge on backside with filament tape.





Money

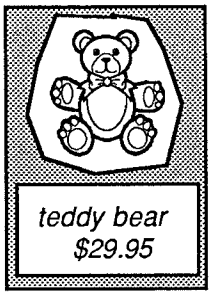
You'll need 30 dimes, 30 pennies, and 20 fake dollar bills, 20 tens and 12 hundreds. Store in coin tubes and tag packages.



Note: If you are making ing your own paper money, use different colors of green for easier identification of bills.

Catalog Pictures

Cut out and glue to tag. Label and price. Contact or laminate. Children like to buy VCRs, etc., so go for it!



Record Sheets

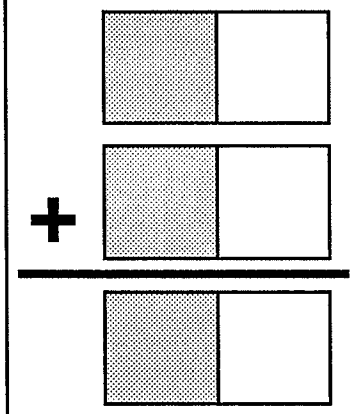
Locate Catalog Addition record sheet in blacklines and run copies. It you want this activity to fit in a half box, cut the record sheets and make them into small booklets. Store money, catalog pictures, and record sheets in half box.

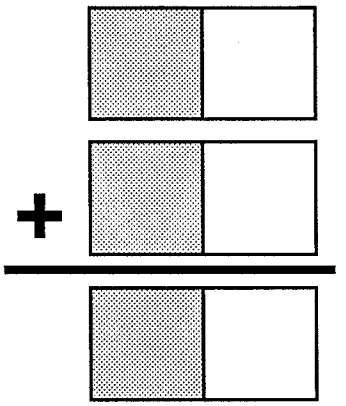
Blacklines

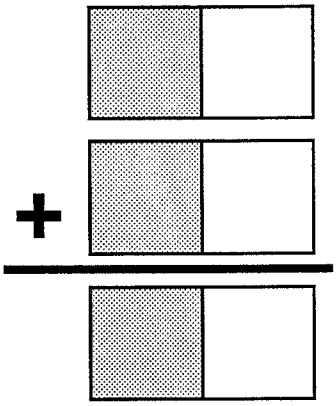
Patterns, cards, spinners, and other materials you'll make for the Practice & Enrichment Boxes described in this packet.

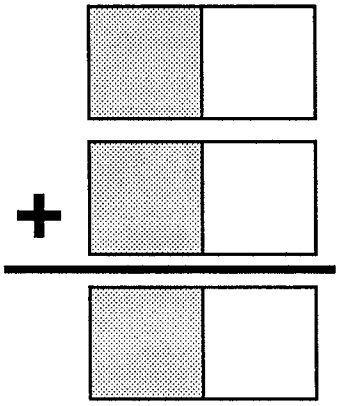
name

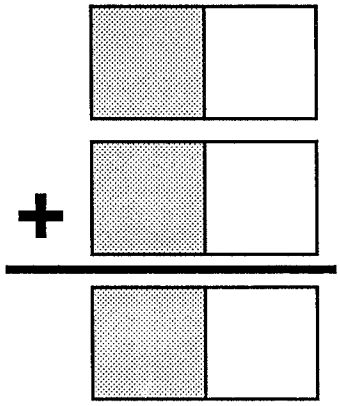
Add Tens

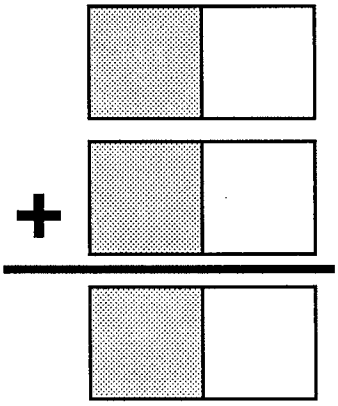


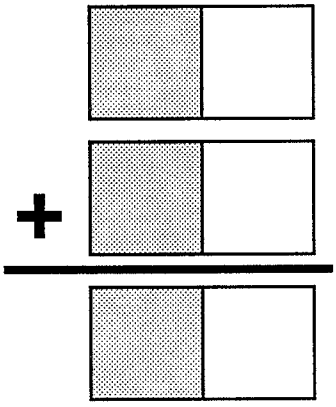






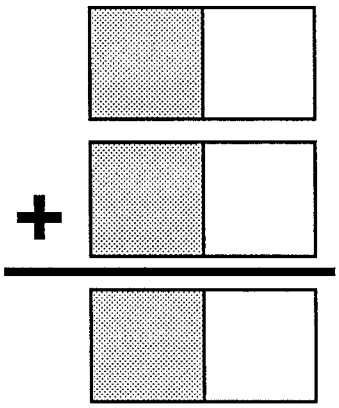


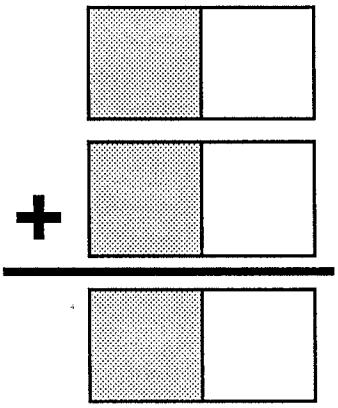


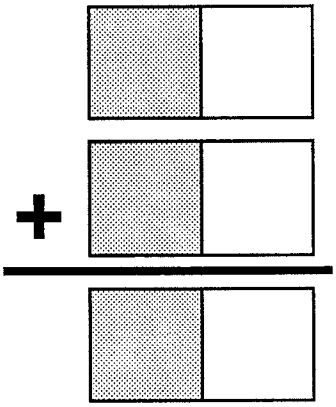


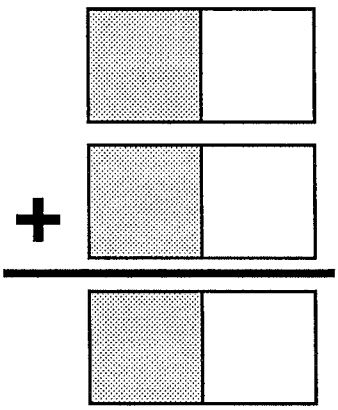
name

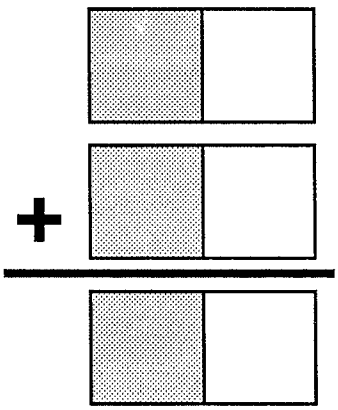
Add Tens

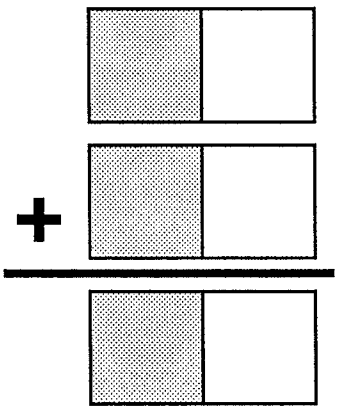


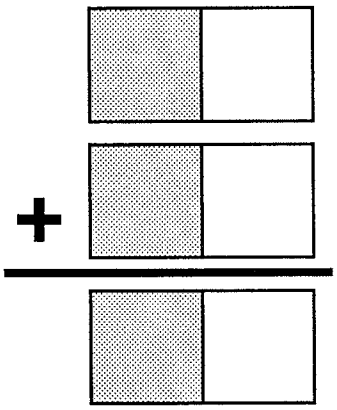






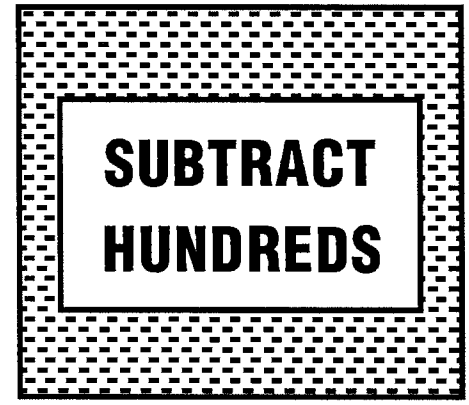


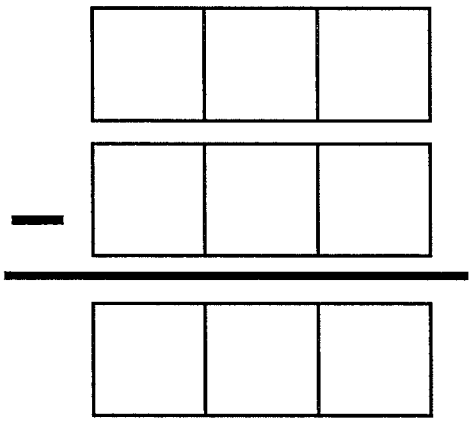


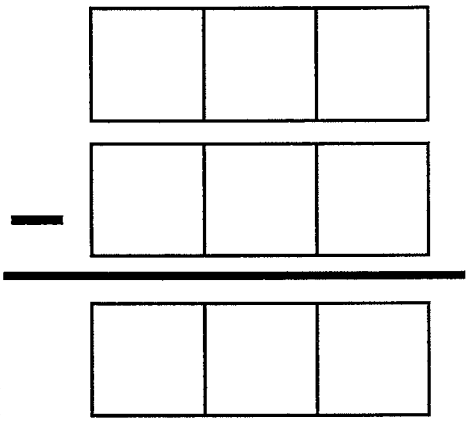


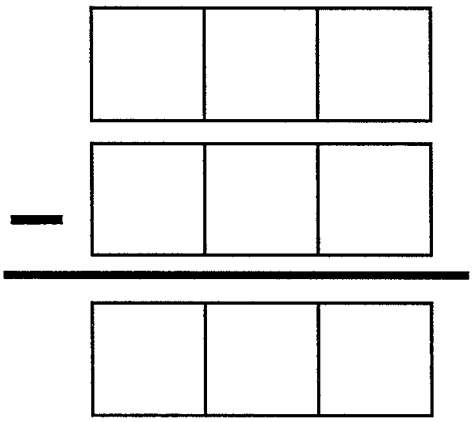
name _____

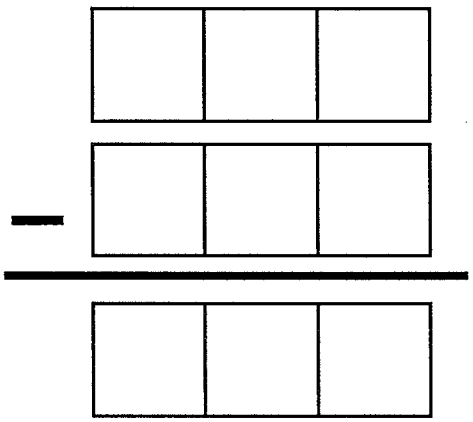
SUBTRACT HUNDREDS

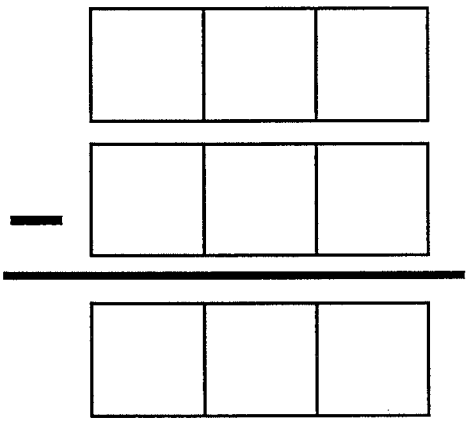












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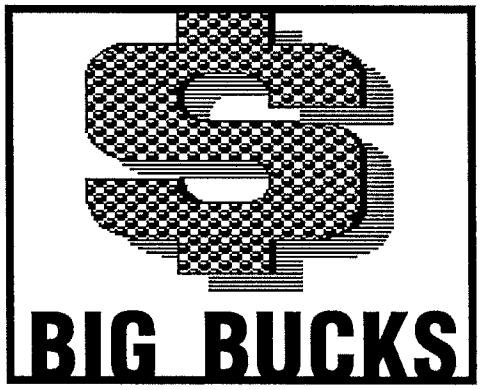
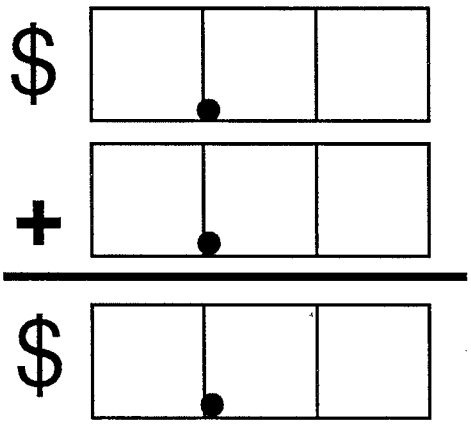
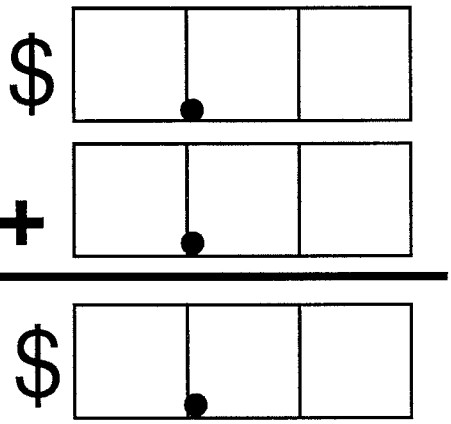
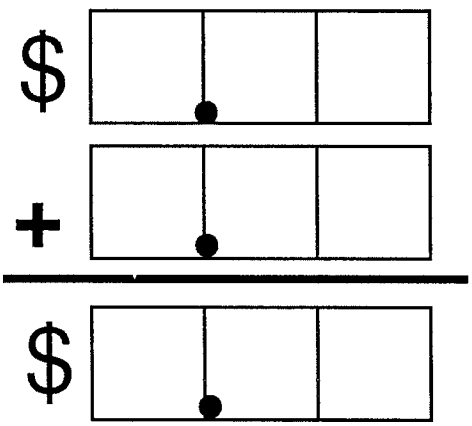
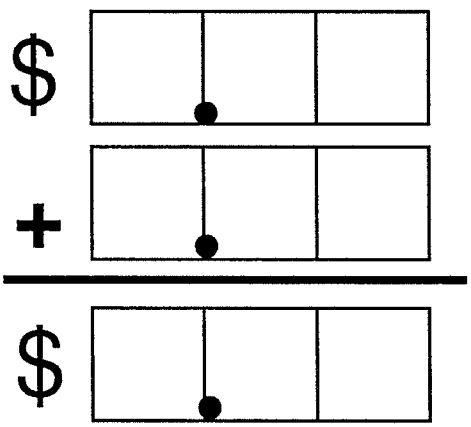
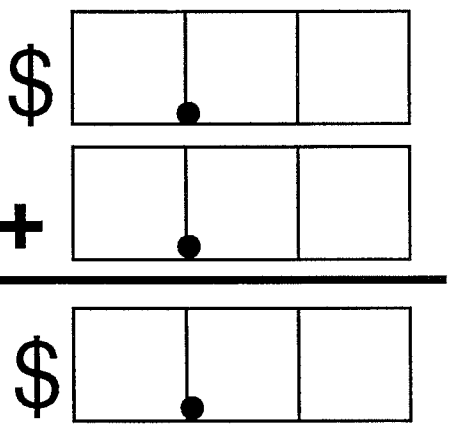






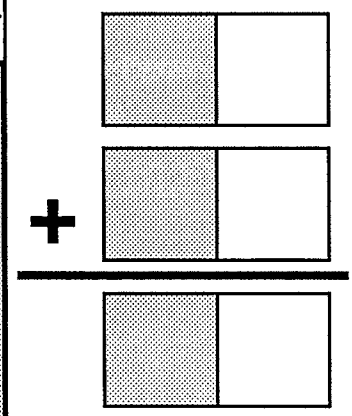


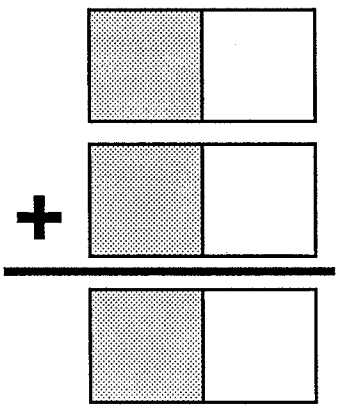


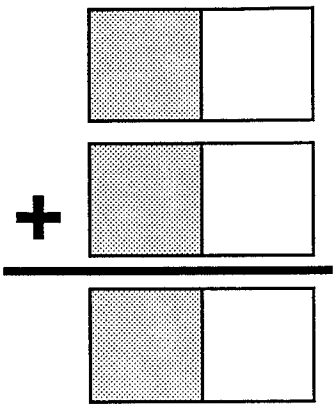


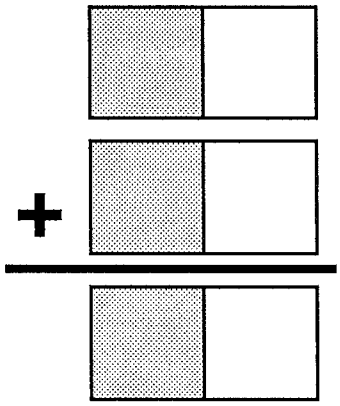
name

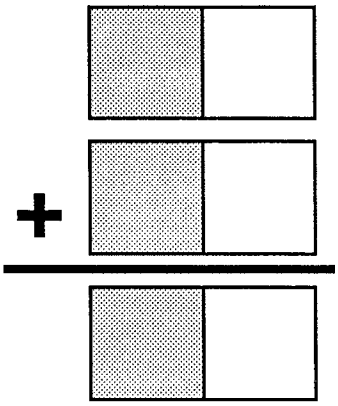
Triangle Toss

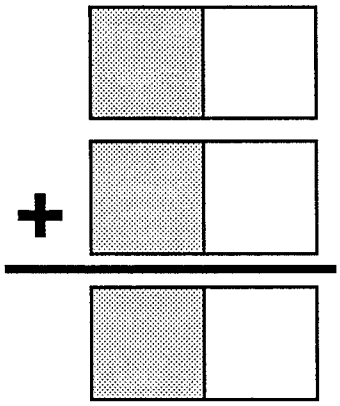


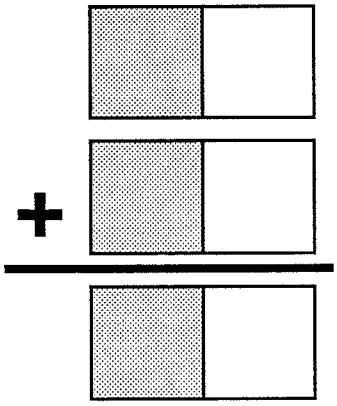






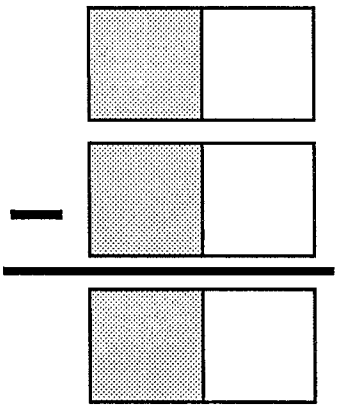


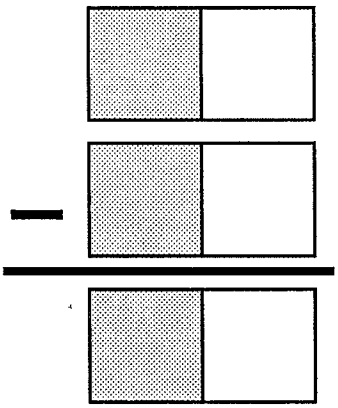


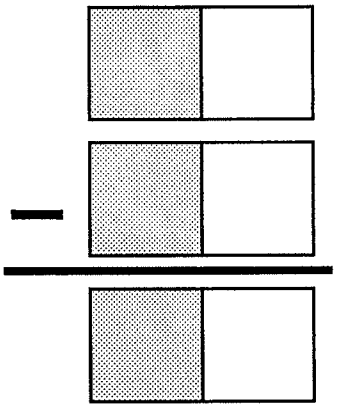


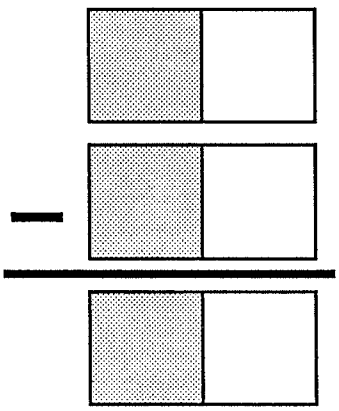
name

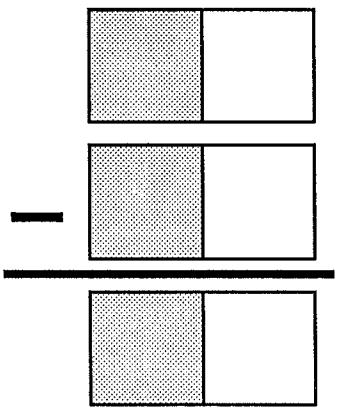
Subtract Tens

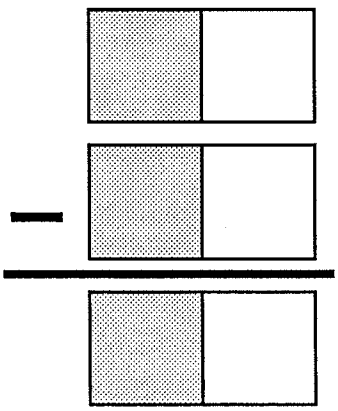


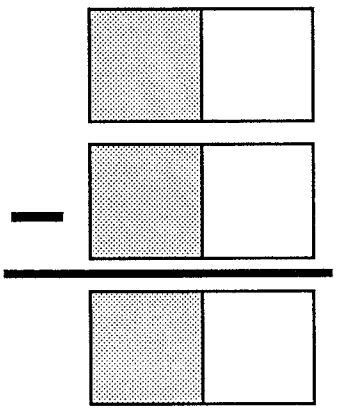








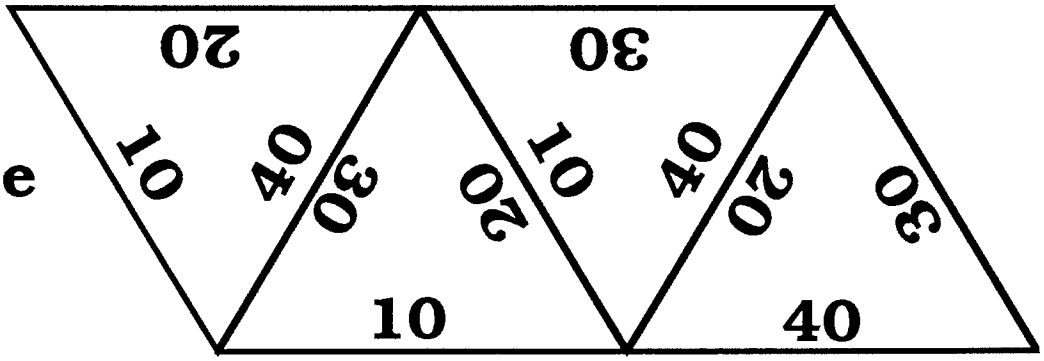




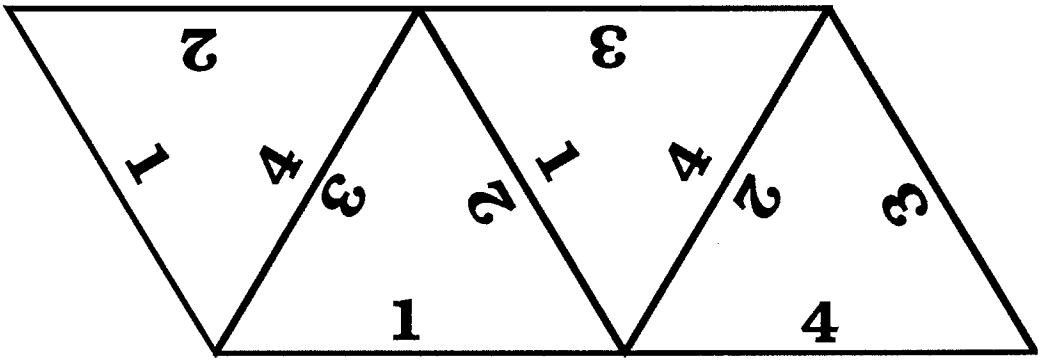
Big Bucks

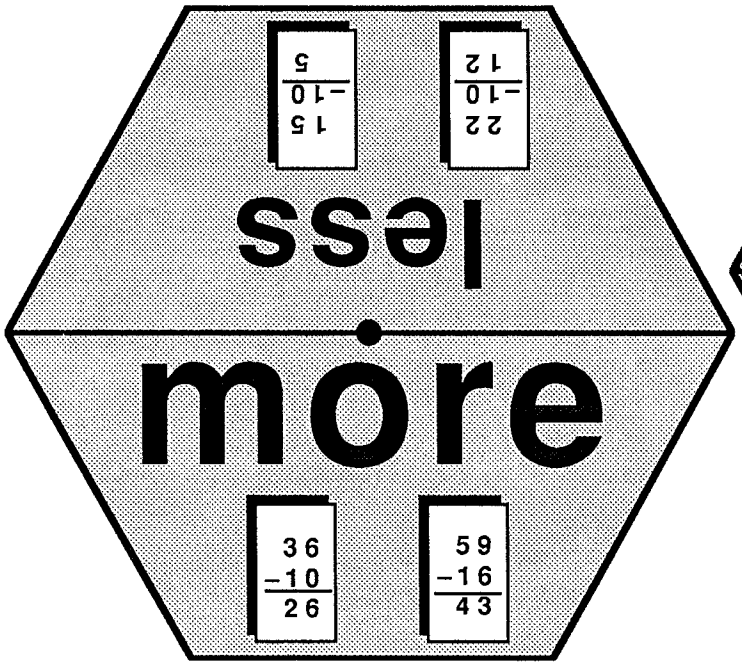
triple spinner tops

Triangle Toss

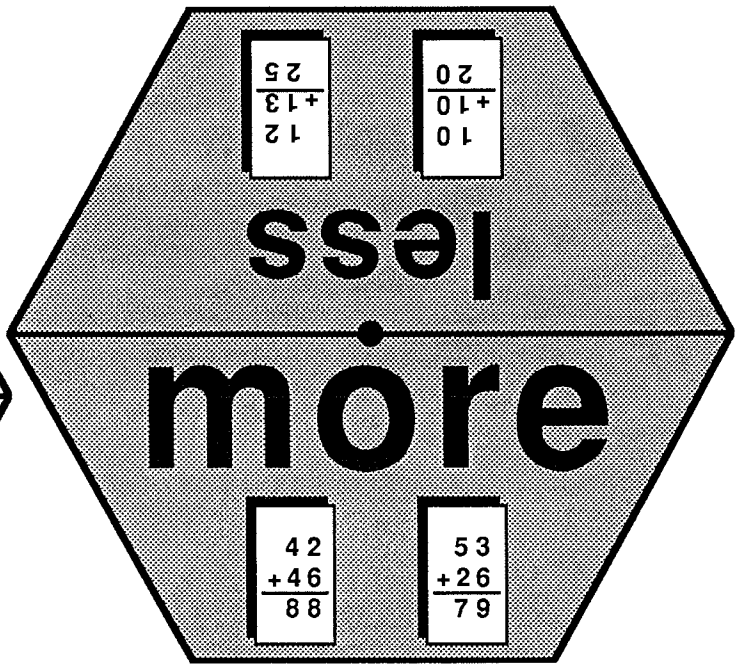


dice pattern

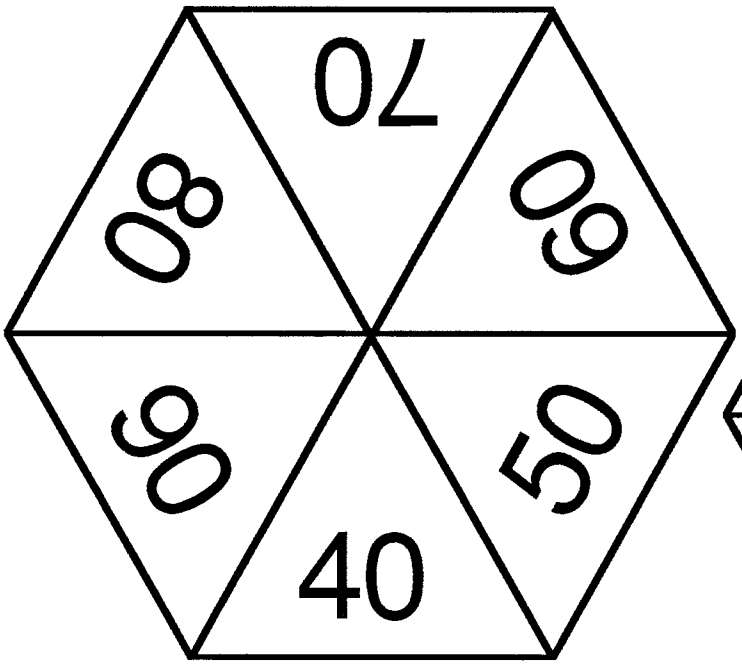




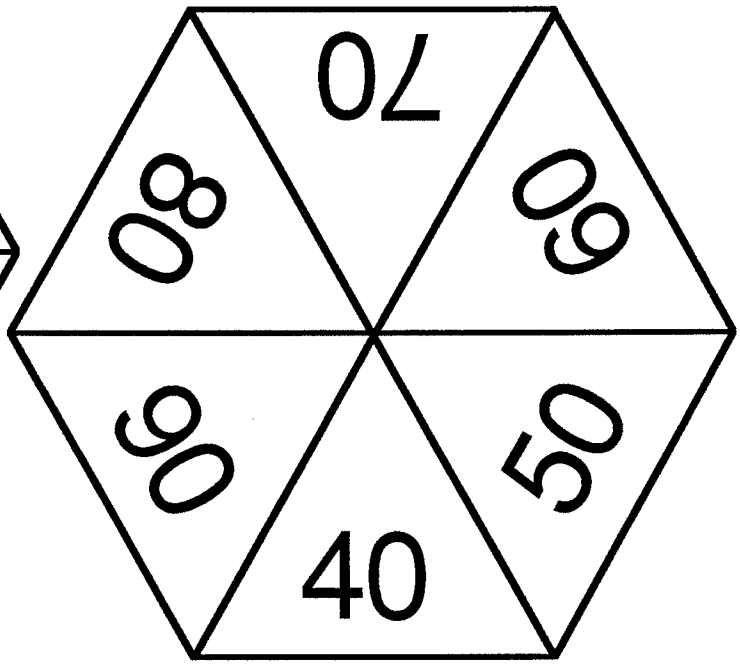
Subtract, Tell, Spin and Win
more or less spinner



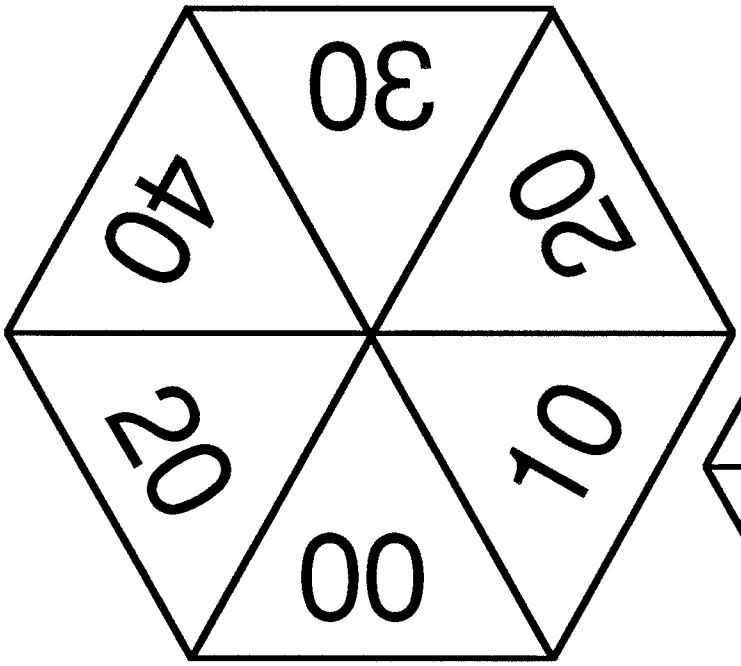
Add, Tell, Spin and Win
more or less spinner



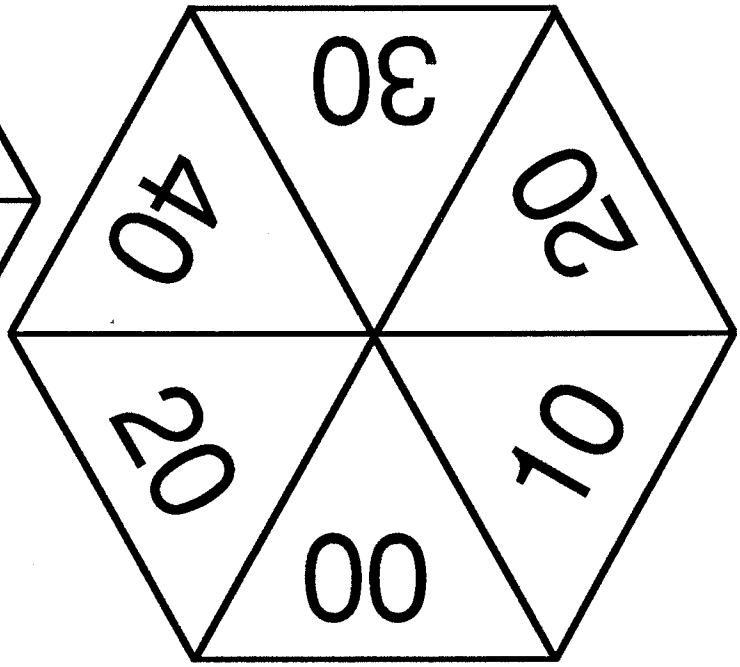
upper spinner



upper spinner



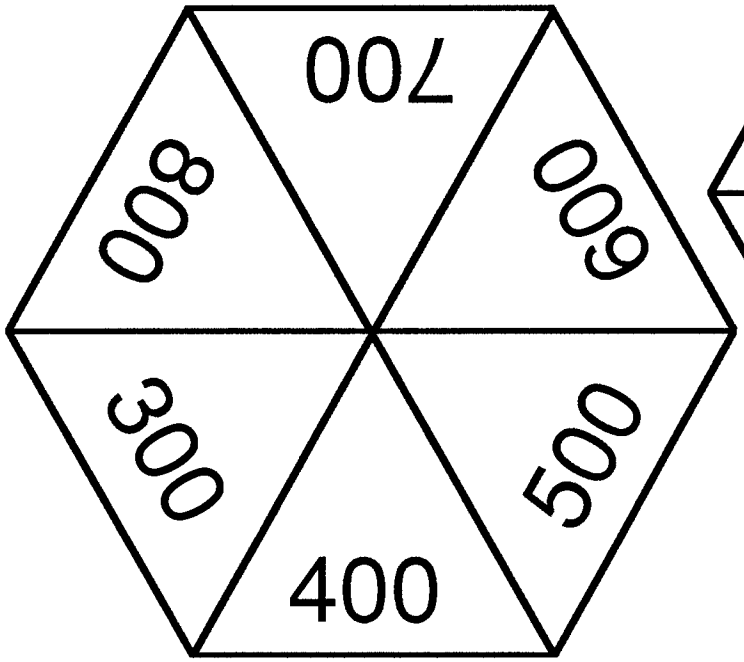
lower spinner



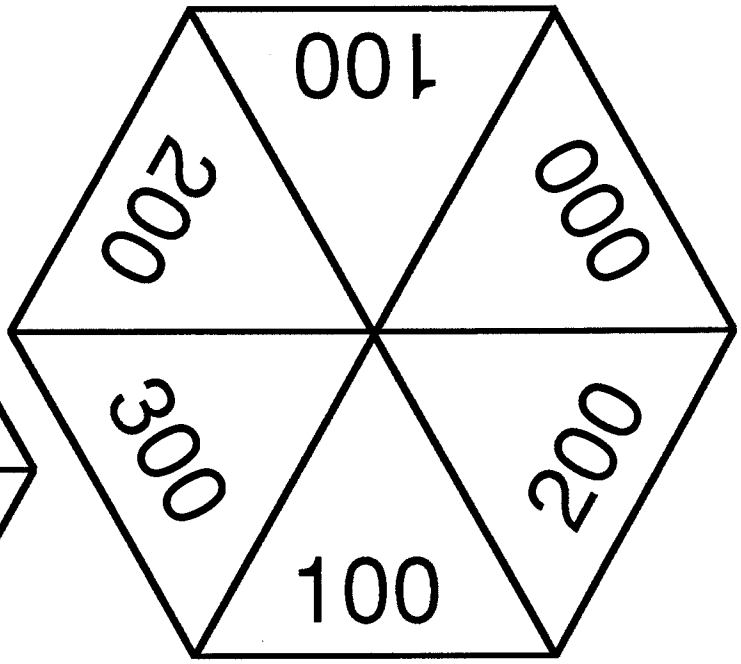
lower spinner

Subtract Tens

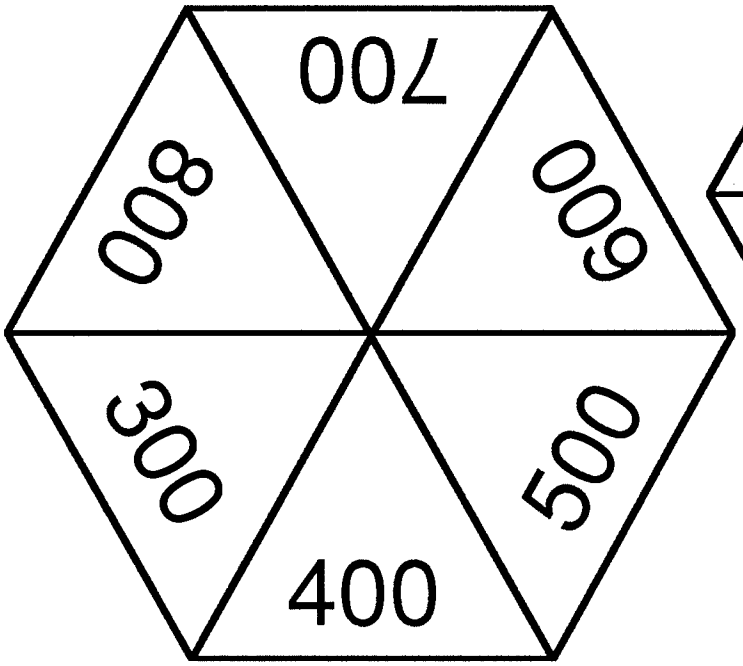
spinner tops



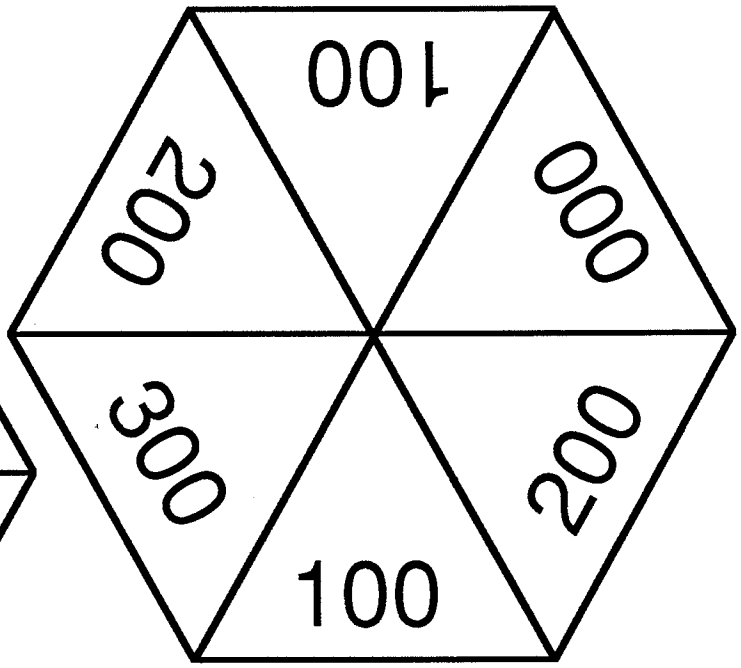
side A



side B



side A



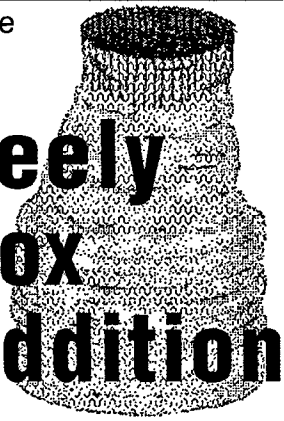
side B

Subtract Hundreds

two double spinners

name

Feely Box Addition



+

+

+

+

+

+

+

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+

+

+

+

name

SPIN and SPIN AGAIN

+

+

+

+

+

+

+

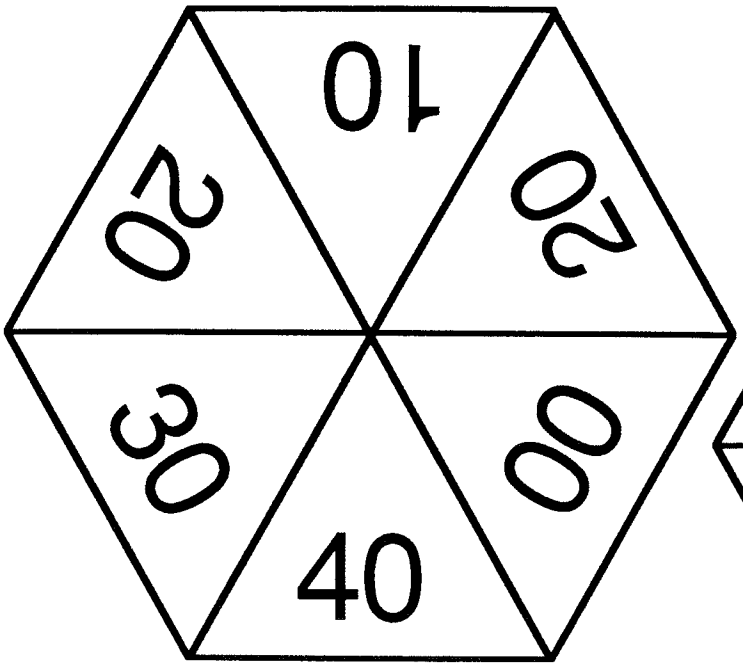
+

+

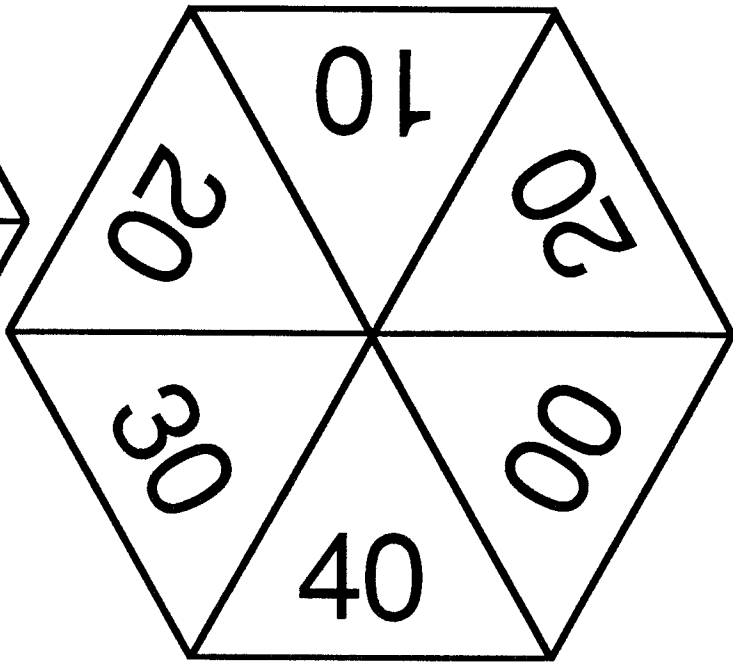
+

+

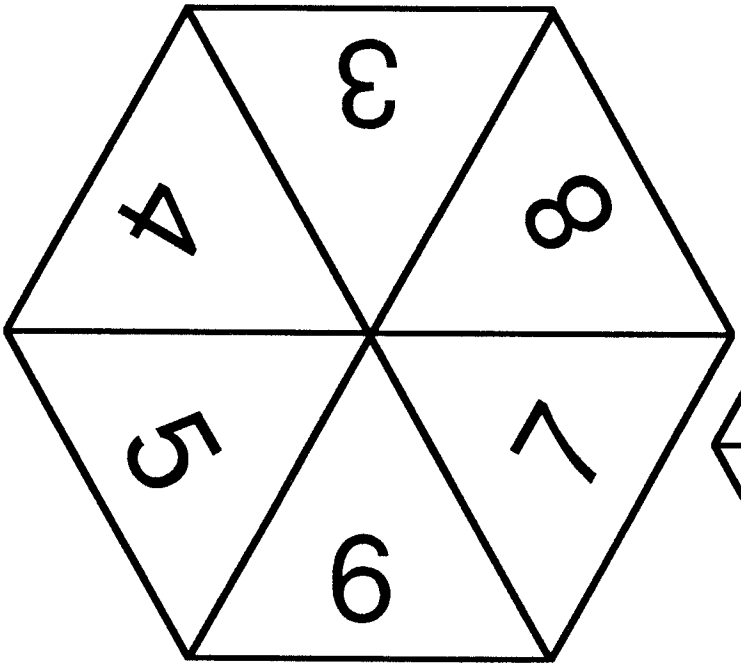
+



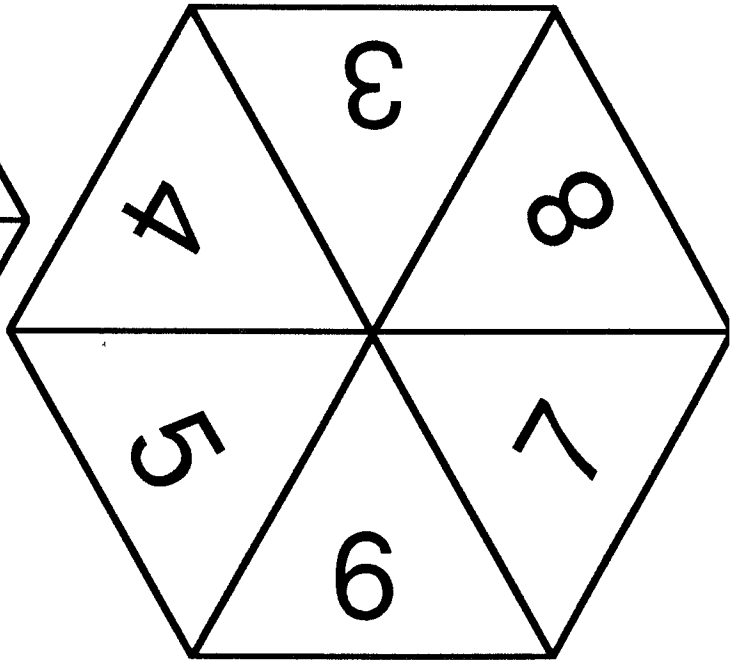
side A



side A



side B



side B

Spin and Spin Again

spinner tops (double spinners)

Name _____

Eating Out

Item	Cost

Name _____

Eating Out

Item	Cost

Name _____

Eating Out

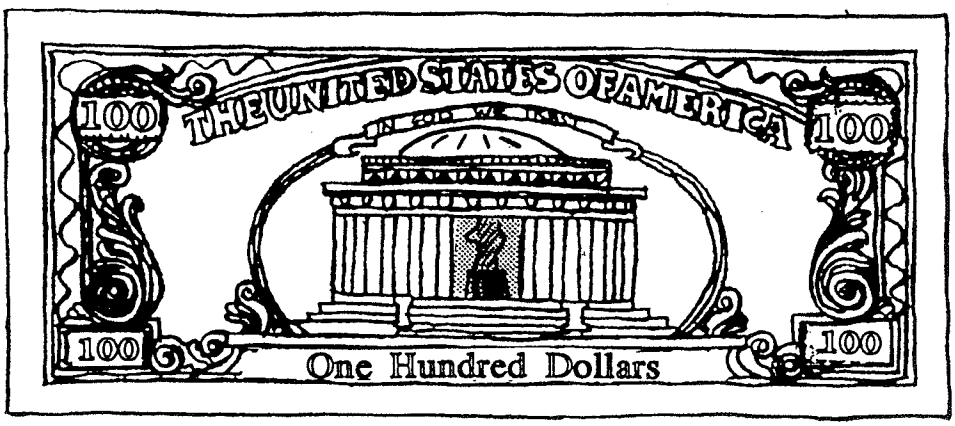
Item	Cost

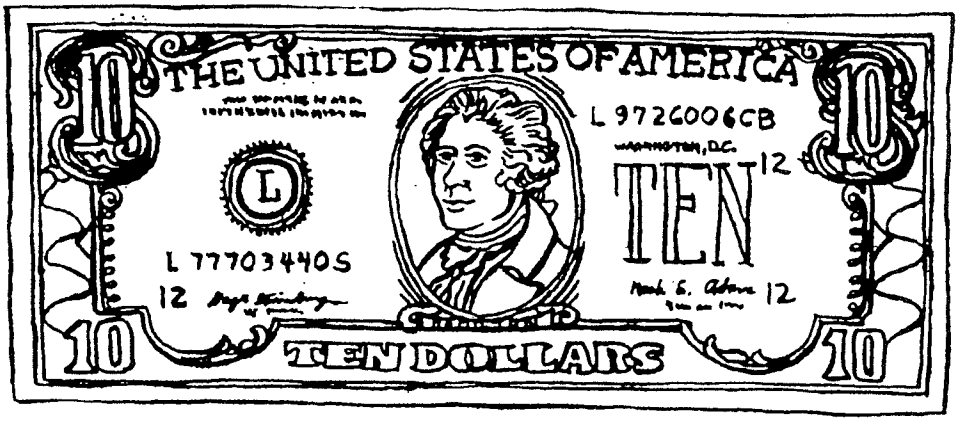
Name _____

Eating Out

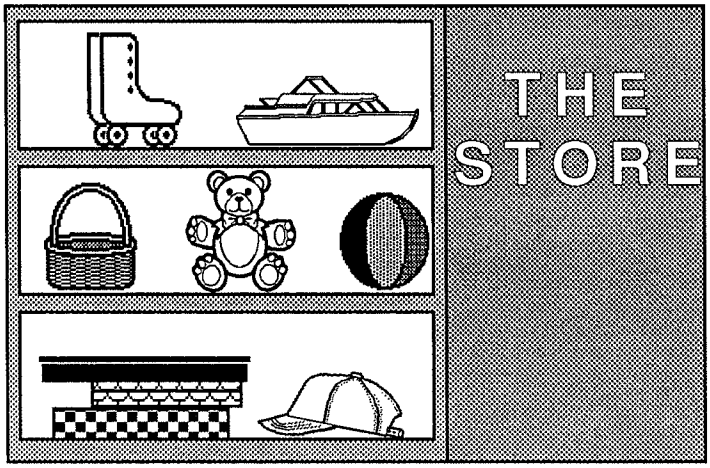
Item	Cost

Fake Dollar Bills





name _____



+

TOTAL

+

TOTAL

+

TOTAL

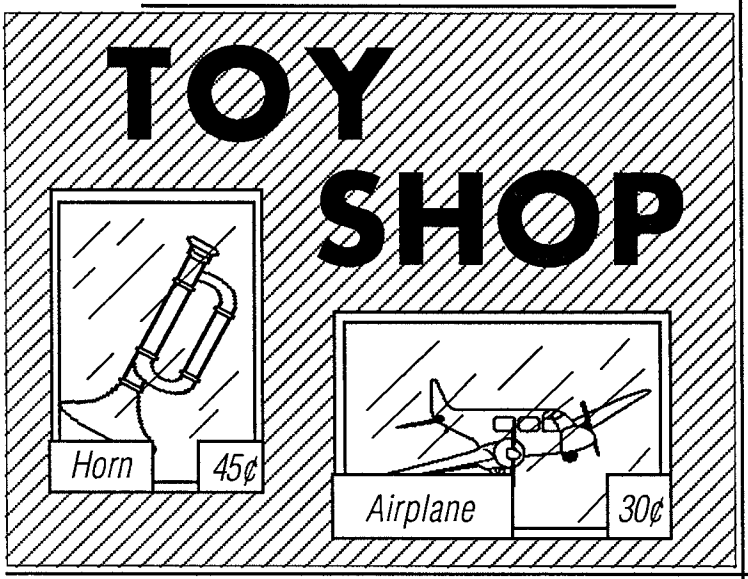
+

TOTAL

+

TOTAL

name _____



+

TOTAL

+

TOTAL

+

TOTAL

+

TOTAL

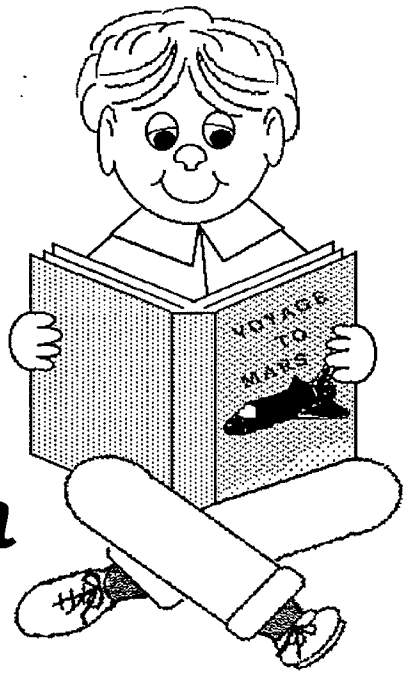
+

TOTAL

+

TOTAL

Book Order Addition



name _____

+

TOTAL

+

TOTAL

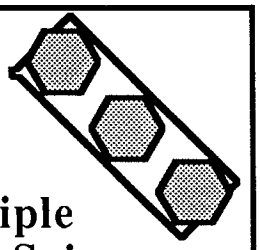
+

TOTAL

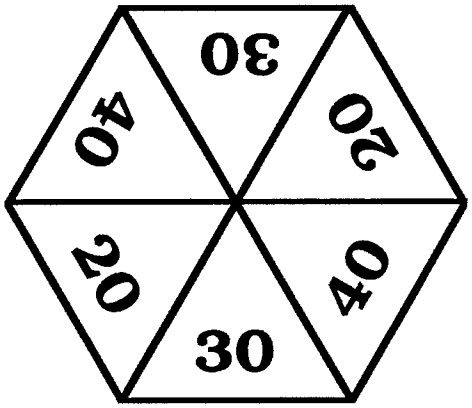
name

Tens Minus Less

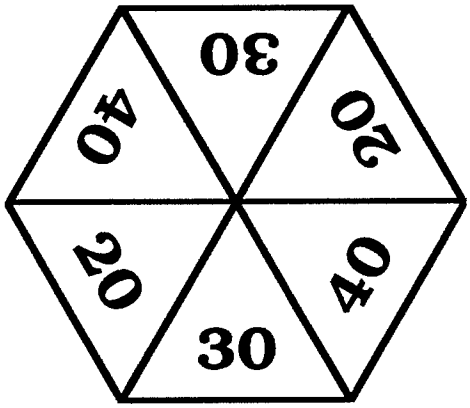
name



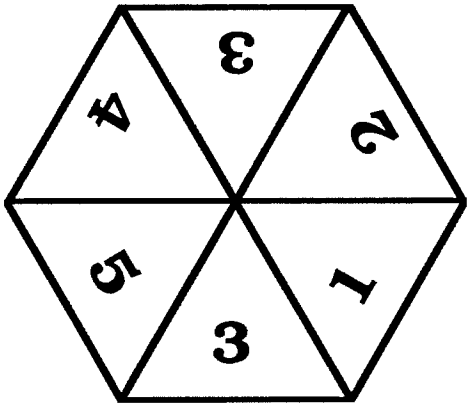
Triple Spin Take Away



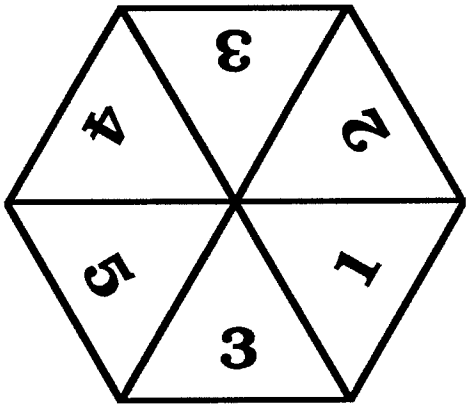
Spinner A



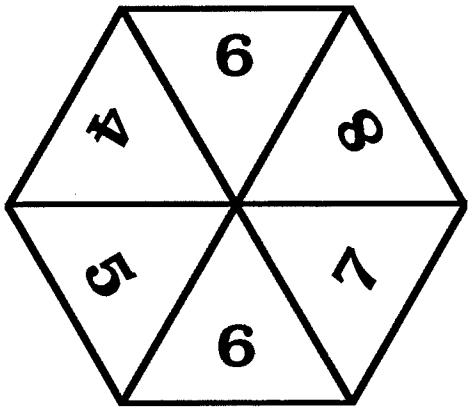
Spinner A



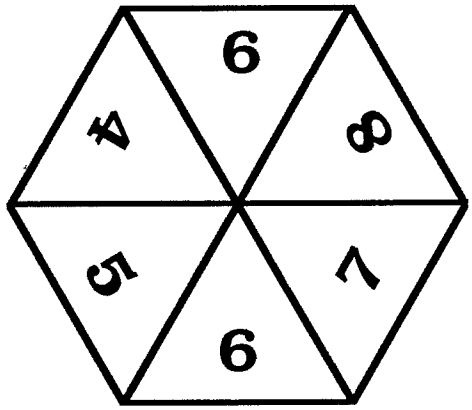
Spinner B



Spinner B



Spinner C

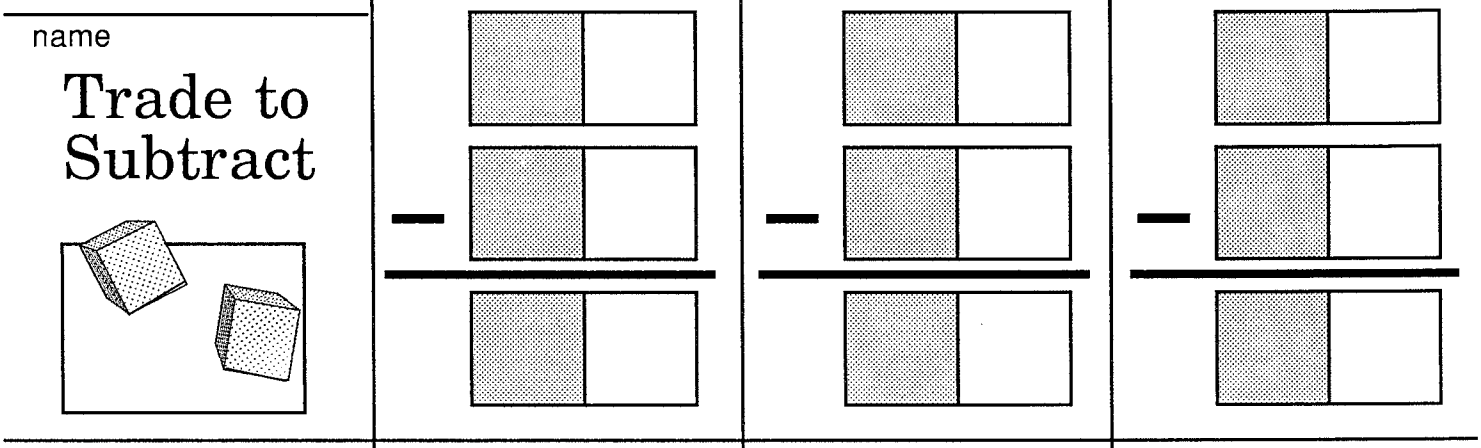


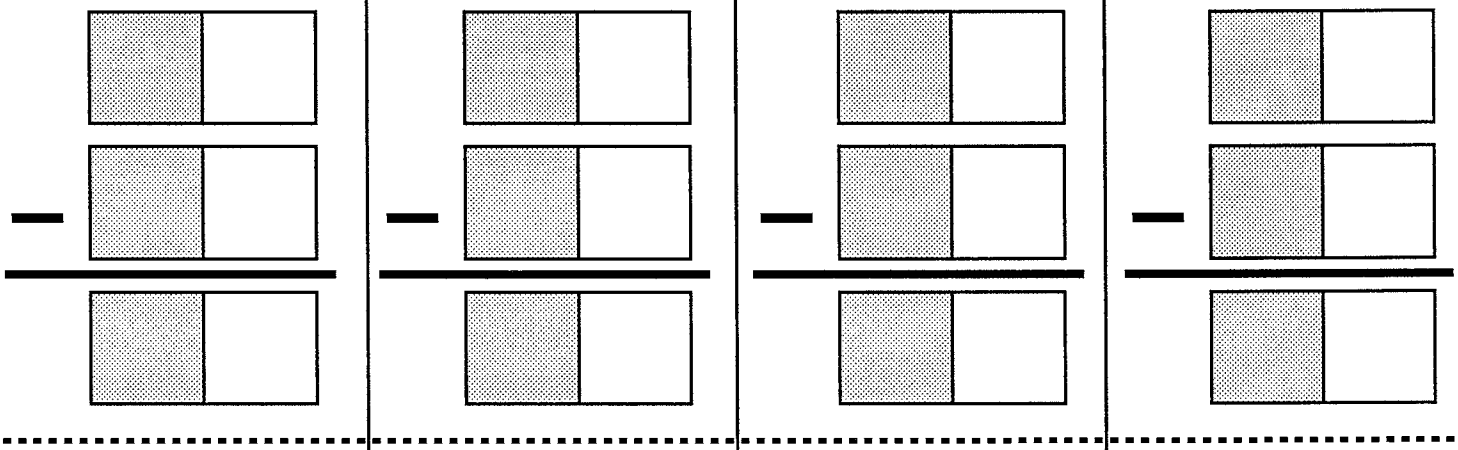
Spinner C

Triple Spin Take Away

name

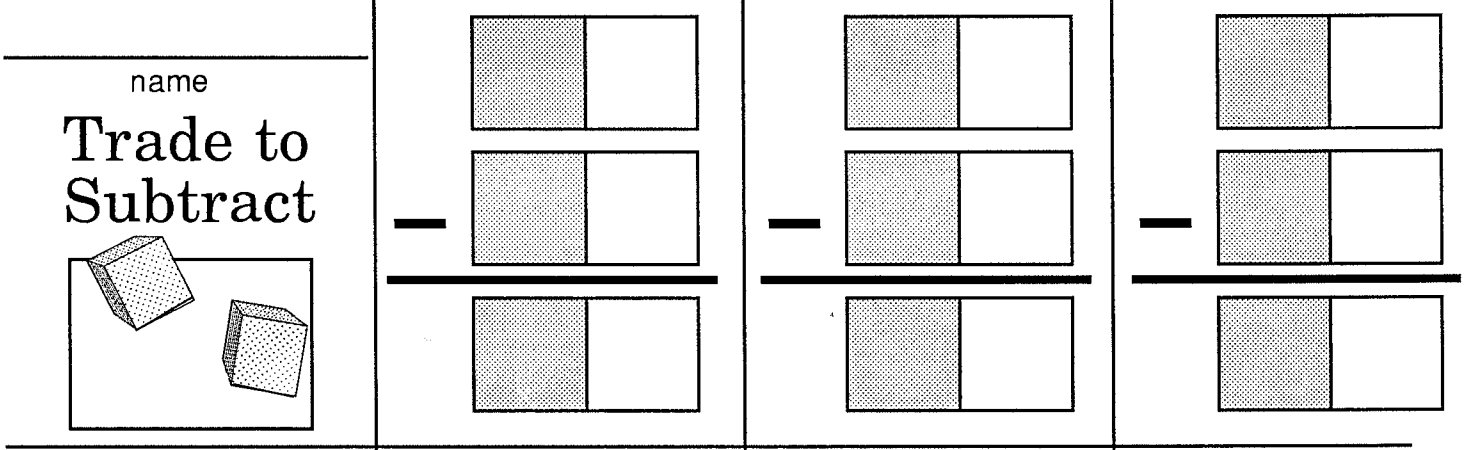
Trade to Subtract

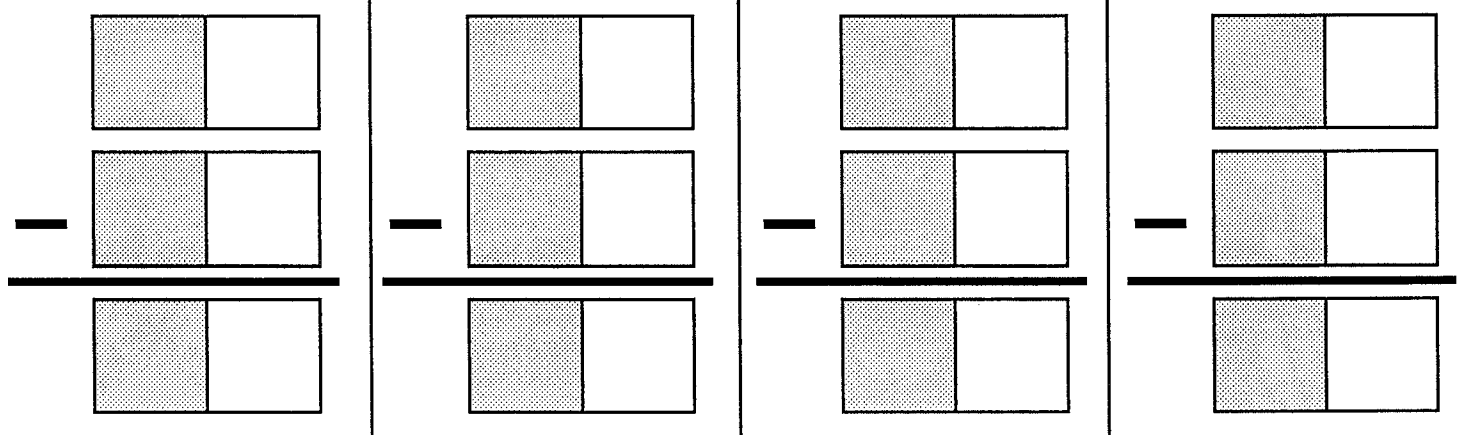




name

Trade to Subtract





name _____

item

cents off –

sale price

item

cents off –

sale price

item

cents off –

sale price

item

cents off –

sale price

item

cents off –

sale price

item

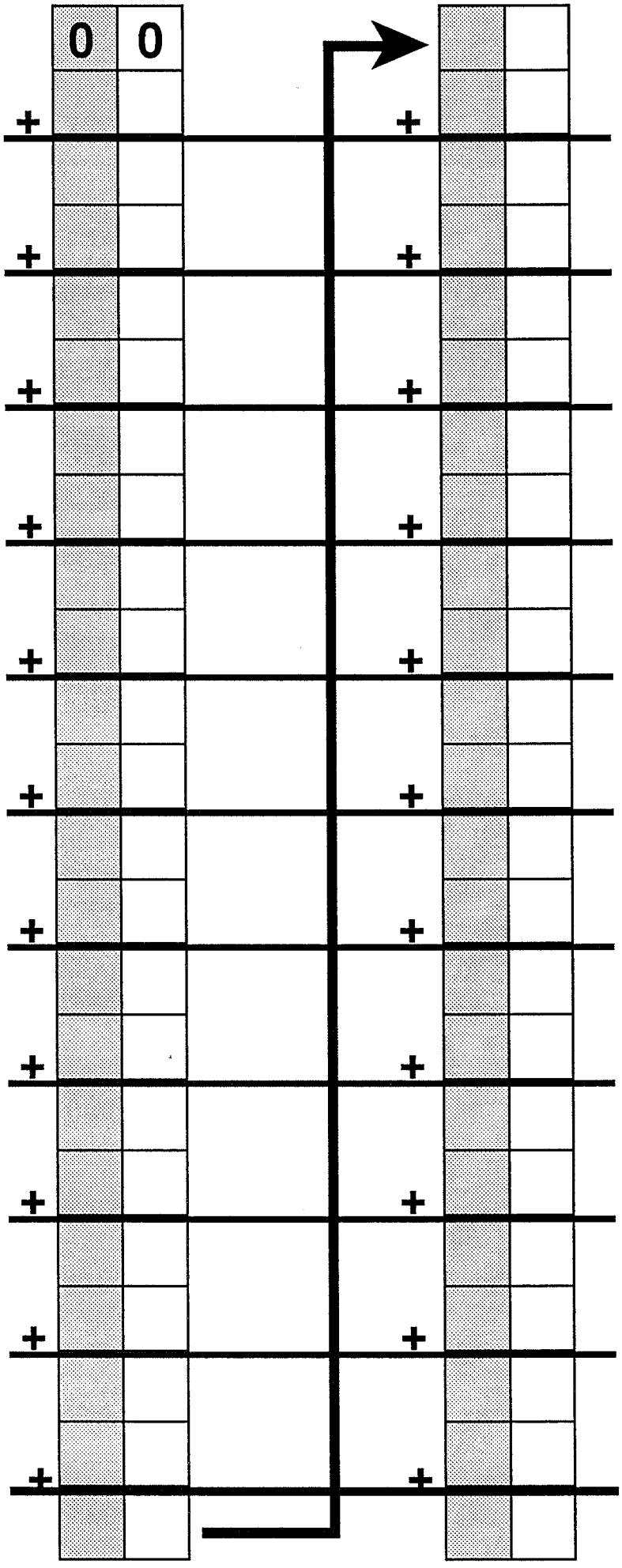
cents off –

sale price

name

_____

RACE to 100



name _____

Grand Prix

first heat

second heat

first heat

second heat

first heat

second heat

first heat

second heat

first heat

second heat

first heat

second heat

first heat

second heat

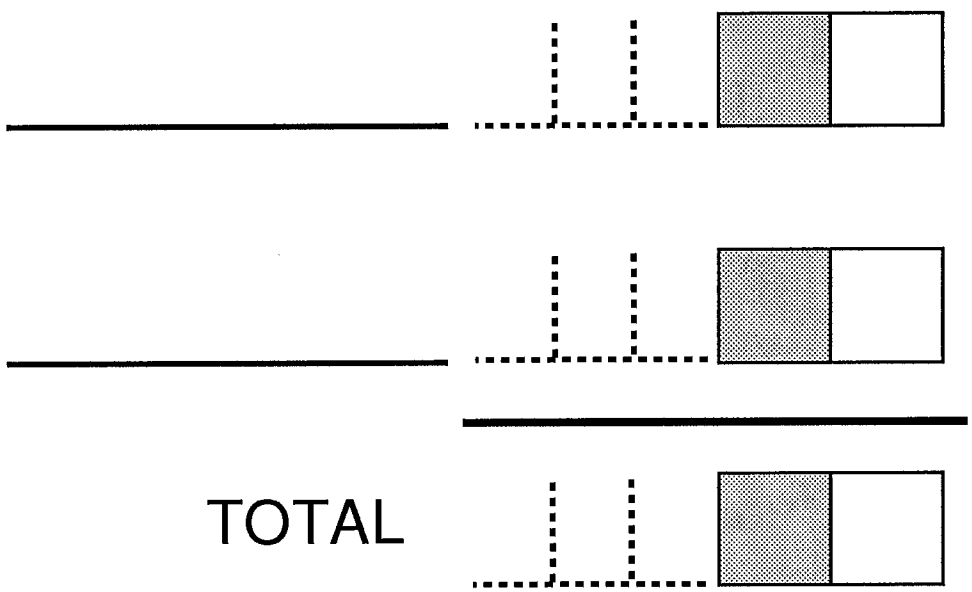
first heat

second heat

name _____

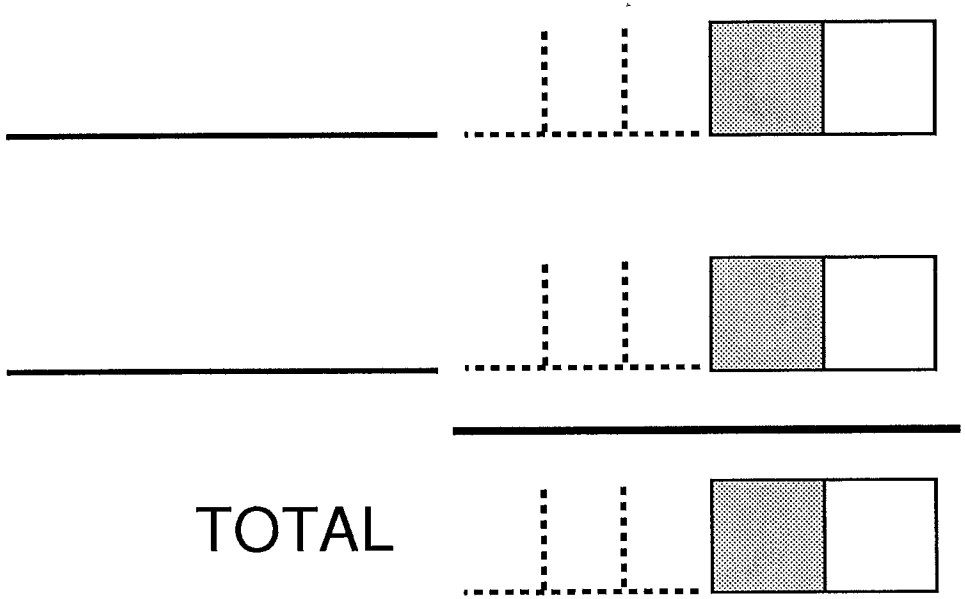
CATALOG ADDITION

Items



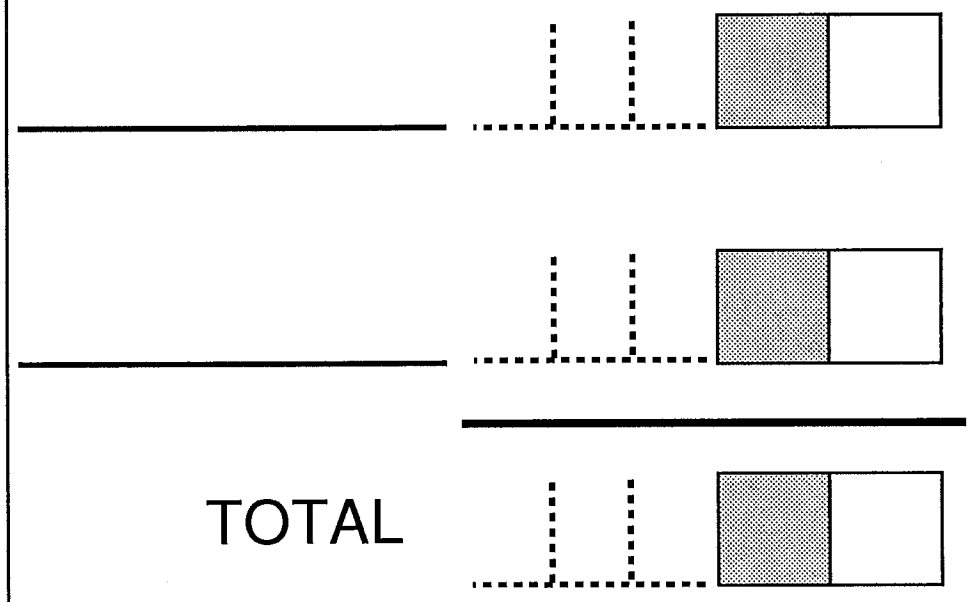
TOTAL

Items



TOTAL

Items



TOTAL

Eating Out

dollars	dimes	pennies

Eating Out

dollars	dimes	pennies
		
		
		

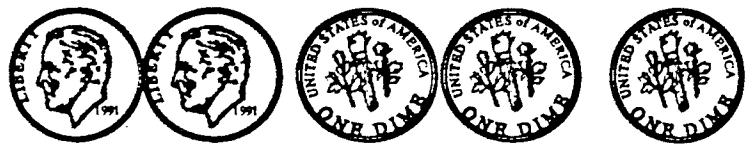
Eating Out

dollars	dimes	pennies
		
		
		

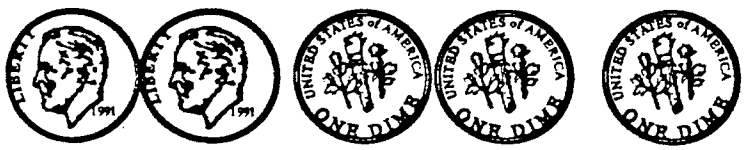
Eating Out

dollars	dimes	pennies
		
		
		

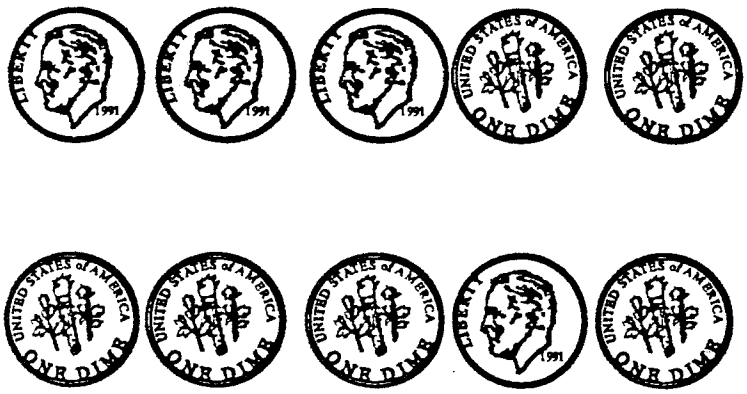
THE STORE

dimes	pennies
	
	
	
	
	
	

THE STORE

dimes	pennies
	
	
	
	
	
	

THE STORE

dimes	pennies
	
	
	
	
	

THE STORE

dimes	pennies
	
	
	
	
	
	

TOY SHOP

dimes	pennies
	
	
	

TOY SHOP

dimes	pennies
	
	
	
	
	

TOY SHOP

dimes	pennies
	
	
	
	
	
	

TOY SHOP

dimes	pennies
	
	
	
	
	

Book Order Addition

dollars	dimes	pennies

Book Order Addition

dollars	dimes	pennies
		
		
		

Book Order Addition

dollars	dimes	pennies
		
		
		

Book Order Addition

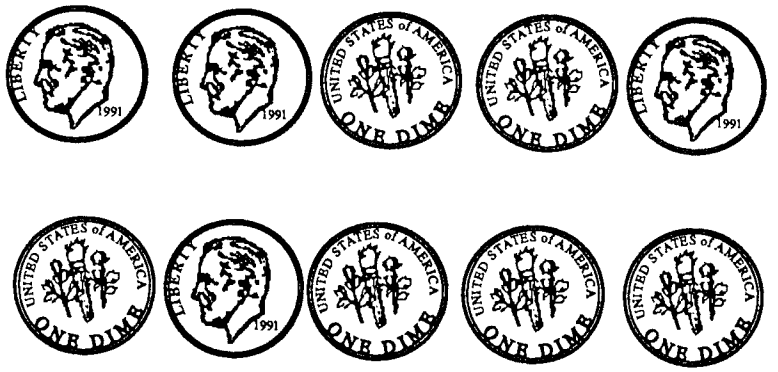
dollars	dimes	pennies

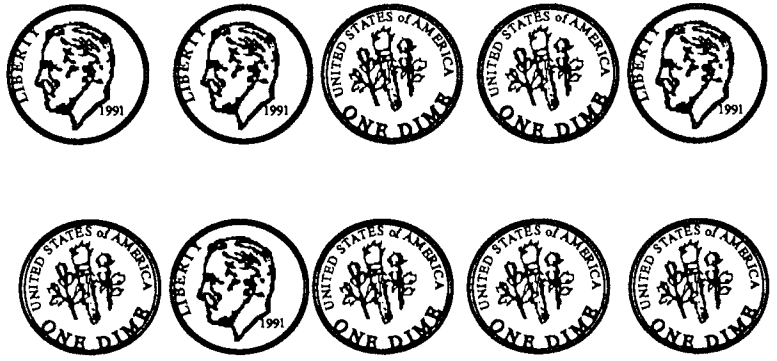
CATALOG	ADDITION
 hundred dollar bills	ten dollar bills 

CATALOG ADDITION

$1.00 one dollar bills

dimes





CATALOG	ADDITION
pennies	hundred dollar bills $100.00
	
	
	

CATALOG	ADDITION
 ten dollar bills	one dollar bills 

CATALOG ADDITION

dimes | **pennies**

Apply the appropriate labels on both ends of each box lid. Either run the labels on full-sheet Avery Labels No. 5165, cut apart and attach; or simply cut apart these pages and glue or tape on.

Add Tens

A PRACTICE & ENRICHMENT BOX

Big Bucks

A PRACTICE & ENRICHMENT BOX

Triangle Toss

A PRACTICE & ENRICHMENT BOX

Subtract Tens

A PRACTICE & ENRICHMENT BOX

Subtract Hundreds

A PRACTICE & ENRICHMENT BOX

Feely Box Addition

A PRACTICE & ENRICHMENT BOX

Spin and Spin Again

A PRACTICE & ENRICHMENT BOX

Eating Out

A PRACTICE & ENRICHMENT BOX

The Store

A PRACTICE & ENRICHMENT BOX

The Toy Shop

A PRACTICE & ENRICHMENT BOX

Book Order Addition

A PRACTICE & ENRICHMENT BOX

Tens Minus Less

A PRACTICE & ENRICHMENT BOX

Triple Spin Take Away

A PRACTICE & ENRICHMENT BOX

Trade to Subtract

A PRACTICE & ENRICHMENT BOX

Add Tens

A PRACTICE & ENRICHMENT BOX

Big Bucks

A PRACTICE & ENRICHMENT BOX

Triangle Toss

A PRACTICE & ENRICHMENT BOX

Subtract Tens

A PRACTICE & ENRICHMENT BOX

Subtract Hundreds

A PRACTICE & ENRICHMENT BOX

Feely Box Addition

A PRACTICE & ENRICHMENT BOX

Spin and Spin Again

A PRACTICE & ENRICHMENT BOX

Eating Out

A PRACTICE & ENRICHMENT BOX

The Store

A PRACTICE & ENRICHMENT BOX

The Toy Shop

A PRACTICE & ENRICHMENT BOX

Book Order Addition

A PRACTICE & ENRICHMENT BOX

Tens Minus Less

A PRACTICE & ENRICHMENT BOX

Triple Spin Take Away

A PRACTICE & ENRICHMENT BOX

Trade to Subtract

A PRACTICE & ENRICHMENT BOX

On Sale

A PRACTICE & ENRICHMENT BOX

Add, Tell, Spin and Win

A PRACTICE & ENRICHMENT BOX

Subtract, Tell, Spin and Win

A PRACTICE & ENRICHMENT BOX

Race to 100

A PRACTICE & ENRICHMENT BOX

Grand Prix

A PRACTICE & ENRICHMENT BOX

Catalog Addition

A PRACTICE & ENRICHMENT BOX

On Sale

A PRACTICE & ENRICHMENT BOX

Add, Tell, Spin and Win

A PRACTICE & ENRICHMENT BOX

Subtract, Tell, Spin and Win

A PRACTICE & ENRICHMENT BOX

Race to 100

A PRACTICE & ENRICHMENT BOX

Grand Prix

A PRACTICE & ENRICHMENT BOX

Catalog Addition

A PRACTICE & ENRICHMENT BOX