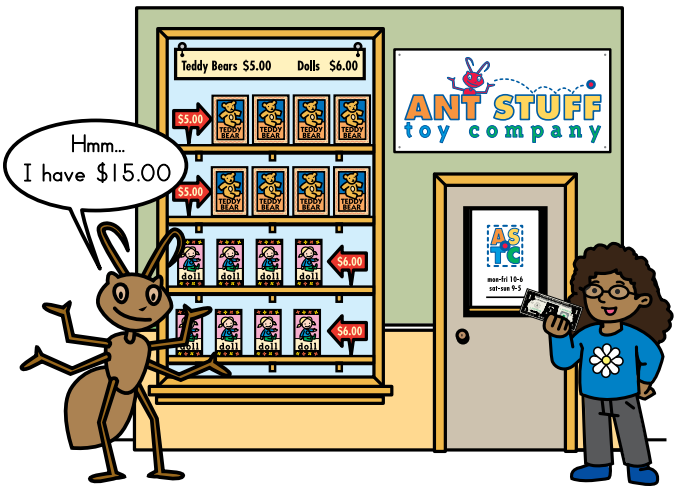
Bridges in Mathematics
Grade 2 Unit 7

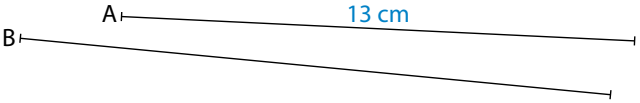
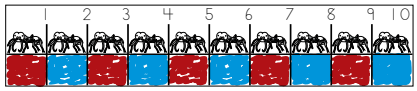
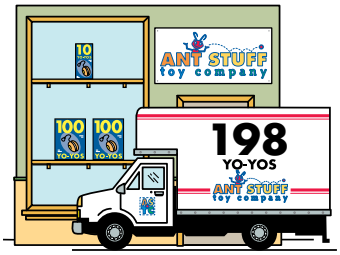
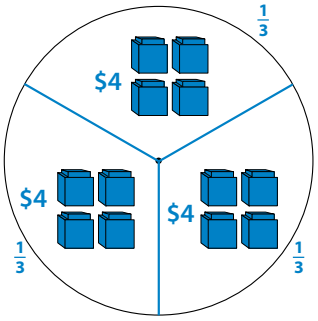
Measurement, Fractions & Multidigit Computation



In this unit, your student will:

- Measure with centimeters and meters
- Pose and solve problem situations involving money amounts and 3-digit numbers
- Continue to work with fractions of shapes, especially halves, thirds, and fourths

Your student will practice these skills by solving problems such as these:

PROBLEM	COMMENTS
Use your army ant ruler to measure each line segment in centimeters. Which is shorter? How much shorter is it?  15 – 13 = 2 Line segment A is 2 cm shorter than line segment B.	In this unit, students create their own army ant rulers to measure the lengths of objects in centimeters.  Students learn that 10 army ant rulers are equal to 1 meter and that 1 meter is equal to 100 centimeters. In other problems, students use a meterstick to measure the length of longer objects.
The store already has 210 yo-yos, and they ordered 198 more. How many yo-yos will they have in all?  210 + 198 = ? 200 + 100 = 300 10 + 90 = 100 0 + 8 = 8 300 + 100 + 8 = 408	Students solve several problems in this unit related to a toy store for ants. The toys are often in packages of 10 or 100 to support students' work with place value. There are several strategies second graders might use to solve the problem. In this problem, the student used place value splitting — adding the hundreds first, then the tens, then the ones. Lastly, they added the partial sums together.
Draw lines on this pizza to make 3 equal slices. If the price of the whole pizza is $12, what is the price of each slice? Show your thinking.  Each slice = $4 $4 + $4 + $4 = $12	This problem-solving activity requires students to draw upon their understanding of fractions, money, and addition. After dividing the pizza into thirds, this student used 12 Unifix cubes to represent 12 dollars, dividing the cubes equally among the 3 slices. This helps them come to the conclusion that each slice costs $4.

Frequently Asked Questions About Unit 7

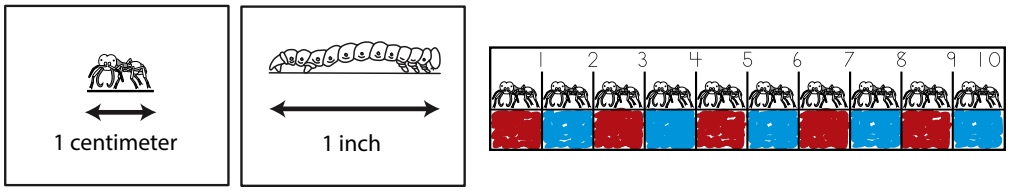
Q: Why does a math unit focus on ants?

A: Students are more engaged when topics are interesting to them. Mathematics is certainly an interesting topic in its own right, but second graders are often especially interested in the creatures that inhabit the world around them.

Students delve into the world of army ants and use this context to learn about metric measurement. In an ants-at-a-picnic context, students explore ways to place the ants into equal lines. Finally, they explore a toy store made just for ants. This factual and fanciful unit taps into students' natural interests by offering meaningful contexts for problem solving with measurement, fractions, addition, and subtraction. Along the way, students see how math is used outside of school.

Q: Why aren't students using regular rulers for measuring activities?

A: Centimeter and inch units of measurement are quite abstract for young children. The fact that students now associate centimeters with the army ant and inches with the inchworm helps them distinguish between the two units and remember that a centimeter is smaller than an inch. Unlike standard metric rulers, students' army ant rulers include no markings for ½ or ⅒ of a centimeter. This helps students see that the unit, 1 centimeter, is the length of the army ant and not just the tick mark labeled 1. They also use regular measuring tapes and rulers but might need more support to read these correctly until all the tick marks have meaning.



Q: How can I support my student's learning?

A: Lengths in the United States often use customary units such as inches and feet, but it's important that you make an effort to use and discuss centimeters and meters with your student as well. Frequent use of metric units will help second graders develop intuition with the metric system that can last a lifetime.

To further support your student in learning mathematics, you can:

- Visit mathathome.mathlearningcenter.org and work through some or all of the activities in Grade 2: Set 7 together. These activities complement the learning that takes place in the classroom during Unit 7 and provide fun ways to engage children in mathematical thinking. This set also includes digital versions of familiar games that your student has learned at school, such as Race to the Cookie Jar.
- Visit apps.mathlearningcenter.org and invite your student to explore the Money Pieces, Number Line, Number Pieces, and Fractions apps. Throughout Unit 7, students explore these tools in their physical forms in the classroom.
- Read books with your student that focus on measuring with metric units, money, and fractions, and addition or subtraction within 1,000. Some suggestions include:
  - *The Metric System* by David A. Adler, illustrated by Edward Miller
  - *A Fraction's Goal—Parts of a Whole* by Brian P. Cleary, illustrated by Brian Gable
  - *One Hundred Hungry Ants* by Elinor J. Pinczes, illustrated by Bonnie MacKain
  - *Double Puppy Trouble* by Danica McKeller, Illustrated by Josée Masse
  - *A Dollar, A Penny, How Much and How Many?* by Brian P. Cleary, illustrated by Brian Gable