bridges in mathematics

GRADE 4

Bridges & Number Corner Third Edition

CORRELATIONS

Indiana Academic Standards for Mathematics

number corner

4 MP — Mathematics Process Standards

Standard	Descriptor	Citations	
Mathematics Process Standards			
PS.1	Make sense of problems and persevere in solving them.	**Bridges in Mathematics** Unit 2: M3 S5 Unit 3: M1 S2 Unit 4: M1 S5; M1 S6; M4 S1 Unit 5: M4 S2 Unit 6: M3 S2 Unit 7: M1 S1 Unit 8: M1 S1	**Number Corner** September: Solving Problems October: Calendar Grid, Solving Problems November: Solving Problems December: Solving Problems January: Solving Problems February: Computational Fluency, Number Strings, Solving Problems April: Calendar Grid
PS.2	Reason abstractly and quantitatively.	**Bridges in Mathematics** Unit 1: M2 S1; M2 S2; M3 S3; M4 S3 Unit 2: M2 S4 Unit 4: M3 S1; M3 S2; M4 S1 Unit 5: M1 S4; M4 S2; M4 S3 Unit 6: M3 S3 Unit 8: M1 S3	**Number Corner** October: Calendar Grid November: Calendar Collector, Number Strings January: Calendar Grid February: Calendar Grid April: Calendar Collector
PS.3	Construct viable arguments and critique the reasoning of others.	**Bridges in Mathematics** Unit 4: M2 S5 Unit 5: M2 S3 Unit 6: M3 S5 Unit 7: M1 S2; M1 S3; M1 S4; M1 S5; M1 S6 Unit 8: M2 S2; M3 S6	**Number Corner** September: Number, Strings, Solving Problems October: Computational Fluency, Solving Problems November: Number Strings December: Calendar Collector January: Number Strings, Solving Problems February: Solving Problems May: Calendar Grid
PS.4	Model with mathematics.	**Bridges in Mathematics** Unit 2: M1 S3 Unit 5: M3 S1; M3 S2; M3 S3; M3 S4 Unit 6: M2 S1; M2 S2; M2 S3 Unit 8: M2 S5	**Number Corner** October: Solving Problems November: Solving Problems January: Calendar Collector February: Solving Problems April: Solving Problems May: Calendar Collector

Standard	Descriptor	Citations	
Mathematics Process Standards			
PS.5	Use appropriate tools strategically.	**Bridges in Mathematics** Unit 3: M1 S4; M2 S3 Unit 4: M1 S5; M1 S6; M2 S4; M4 S2 Unit 5: M1 S5; M2 S3; M2 S5; M4 S1 Unit 6: M4 S1; M4 S2 Unit 8: M1 S2; M1 S5; M1 S6; M2 S1; M2 S3; M2 S4; M3 S1; M3 S3; M4 S2; M4 S3	**Number Corner** October: Number Strings November: Calendar Grid December: Calendar Collector, Number Strings February: Calendar Collector, Number Strings April: Solving Problems May: Calendar Collector, Solving Problems
PS.6	Attend to precision.	**Bridges in Mathematics** Unit 4: M2 S1; M2 S2; M2 S3; M2 S4; M2 S5 Unit 5: M1 S6 Unit 7: M1 S1; M1 S6; M1 S7	**Number Corner** October: Calendar Collector November: Number Strings December: Number Strings January: Calendar Collector, Computational Fluency February: Calendar Collector, Solving Problems May: Computational Fluency
PS.7	Look for and make use of structure.	**Bridges in Mathematics** Unit 1: M2 S1; M2 S2; M2 S3; M2 S4; M2 S5 Unit 3: M1 S5 Unit 5: M2 S2; M2 S3; M2 S5 Unit 6: M4 S3 Unit 7: M1 S5; M1 S6; M1 S7	**Number Corner** September: Computational Fluency October: Calendar Grid November: Computational Fluency December: Calendar Collector, Number Strings, Solving Problems January: Calendar Collector February: Calendar Grid, Number Strings May: Number Strings
PS.8	Look for and express regularity in repeated reasoning.	**Bridges in Mathematics** Unit 1: M2 S1; M2 S2; M2 S5 Unit 4: M1 S5	**Number Corner** September: Computational Fluency October: Computational Fluency November: Computational Fluency December: Calendar Collector, Calendar Grid January: Calendar Grid February: Computational Fluency, Solving Problems March: Calendar Grid April: Computational Fluency May: Calendar Grid, Number Strings

4 4.NS — Number Sense

Standard	Descriptor	Citations	
Number Sense			
4.NS.1	Read and write whole numbers up to 1,000,000. Use words, models, standard form, and expanded form to represent and show equivalent forms of whole numbers up to 1,000,000.	**Bridges in Mathematics** Unit 2: M1 S2 Unit 4: M1 S1; M1 S2; M1 S3; M3 S2; M4 S1; M4 S2	**Number Corner** September: Calendar Grid October: Calendar Collector November: Computational Fluency December: Calendar Collector
4.NS.2	Model mixed numbers and improper fractions using visual fraction models such as number lines and area models. Use a visual fraction model to show the equivalency between whole numbers and whole numbers as fractions.	**Bridges in Mathematics** Unit 3: M1 S3; M1 S4; M1 S5; M1 S6; M2 S1; M2 S3 Unit 6: M4 S3 Unit 7: M1 S1; M1 S2	**Number Corner** October: Calendar Grid November: Calendar Collector January: Computational Fluency February: Computational Fluency, Number Strings March: Calendar Collector, Computational Fluency, Number Strings
4.NS.3	Use fraction models to represent two equivalent fractions with attention to how the number and size of the parts differ even though the fractions themselves are the same size. Use this principle to generate equivalent fractions. [In grade 4, limit denominators of fractions to 2, 3, 4, 5, 6, 8, 10, 25, 100.] (E)	**Bridges in Mathematics** Unit 3: M1 S3; M1 S4; M1 S5; M1 S6; M2 S1; M2 S3 Unit 6: M4 S3 Unit 7: M1 S1; M1 S2; M1 S4; M1 S5; M1 S6; M1 S7	**Number Corner** October: Calendar Grid November: Calendar Collector January: Computational Fluency February: Computational Fluency, Number Strings March: Calendar Collector, Computational Fluency, Number Strings May: Number Strings

Standard	Descriptor	Citations	
Number Sense			
4.NS.4	Compare two fractions with different numerators and different denominators (e.g., by creating common denominators or numerators, or by comparing to a benchmark, such as 0, 1/2, and 1). Explain why comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols > , = , or < , and justify the conclusions (e.g., by using a visual fraction model). (E)	**Bridges in Mathematics** Unit 3: M1 S1; M1 S2; M1 S3; M1 S4; M2 S3; M4 S3 Unit 7: M1 S2; M1 S3; M1 S4; M1 S5; M1 S6; M1 S7; M2 S2; M2 S4	**Number Corner** October: Calendar Grid January: Computational Fluency February: Computational Fluency
4.NS.5	Write tenths and hundredths in decimal and fraction notations. Use words, models, standard form, and expanded form to represent decimal numbers to hundredths. Mentally calculate fraction and decimal equivalents for halves and fourths (e.g., 1/2 = 0.5 = 0.50, 7/4 = 1 3/4 = 1.75). (E)	**Bridges in Mathematics** Unit 3: M3 S1; M3 S2; M3 S3; M4 S1; M4 S2 Unit 7: M2 S1; M2 S3	**Number Corner** October: Calendar Grid February: Computational Fluency March: Computational Fluency May: Computational Fluency

Standard	Descriptor	Citations	
Number Sense			
4.NS.6	Compare two decimals to hundredths by reasoning about their size based on the same whole. Record the results of comparisons with the symbols > , = , or < , and justify the conclusions (e.g., by using a visual model). (E)	**Bridges in Mathematics** Unit 3: M3 S2; M3 S4; M4 S2; M4 S3 Unit 7: M2 S3	**Number Corner** February: Computational Fluency March: Computational Fluency May: Computational Fluency
4.NS.7	Use place value understanding to round multidigit whole numbers to any given place value.	**Bridges in Mathematics** Unit 4: M1 S1; M1 S3; M1 S4; M3 S1; M4 S1; M4 S2	**Number Corner** November: Solving Problems

4 4.CA — Computation and Algebraic Thinking

Standard	Descriptor	Citations	
Computation and Algebraic Thinking			
4.CA.1	Multiply a whole number of up to four digits by a one-digit whole number and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Describe the strategy and explain the reasoning. (E)	**Bridges in Mathematics** Unit 2: M1 S4; M1 S5; M2 S1; M2 S2; M2 S3; M3 S1; M3 S2; M3 S3 Unit 5: M3 S1 Unit 6: M1 S1; M1 S2; M1 S3; M3 S1 Unit 7: M3 S1; M3 S2; M3 S3; M3 S4; M4 S1; M4 S2; M4 S3	**Number Corner** September: Number Strings, Solving Problems October: Computational Fluency, Number Strings, Solving Problems January: Number Stings
4.CA.2	Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Describe the strategy and explain the reasoning. (E)	**Bridges in Mathematics** Unit 1: M1 S5; M1 S6 Unit 2: M2 S1; M4 S1; M4 S2; M4 S3; M4 S4 Unit 6: M1 S4; M1 S5; M1 S6; M1 S7; M2 S1; M2 S2; M2 S3; M3 S1; M3 S2; M3 S3; M3 S4	**Number Corner** January: Number Strings, Solving Problems April: Number Strings

Standard	Descriptor	Citations	
Computation and Algebraic Thinking			
4.CA.3	Show how the order in which two numbers are multiplied (commutative property) and how numbers are grouped in multiplication (associative property) will not change the product. Use these properties to show that numbers can be multiplied in any order. Investigate and apply the distributive property. (E)	**Bridges in Mathematics** Unit 1: M1 S2; M2 S1; M2 S4; M2 S5; M2 S6 Unit 6: M1 S1 Unit 7: M3 S5	**Number Corner** September: Number Strings October: Number Strings
4.CA.4	Investigate the mathematical relationship between factors and multiples for whole numbers from 1-100, including the set of factors and multiples for given numbers. Identify sets of factors and multiples for any given whole number up to 100.	**Bridges in Mathematics** Unit 1: M2 S1; M2 S2; M2 S3; M2 S5; M3 S1; M3 S2 Unit 2: M1 S1; M1 S2; M4 S4	**Number Corner** September: Computational Fluency, Solving Problems October: Computational Fluency November: Computational Fluency December: Computational Fluency

Standard	Descriptor	Citations	
Computation and Algebraic Thinking			
4.CA.5	Solve real-world problems with whole numbers involving multiplicative comparison (e.g., by using drawings and equations with a symbol for the unknown number to represent the problem), distinguishing multiplicative comparison from additive comparison. [In grade 4, division problems should not include a remainder.] (E)	**Bridges in Mathematics** Unit 1: M1 S1; M1 S2; M1 S3; M1 S4; M3 S3; M3 S4 Unit 4: M4 S1 Unit 7: M3 S1	**Number Corner** September: Solving Problems November: Calendar Collector January: Calendar Grid April: Calendar Collector
4.CA.6	Add and subtract fractions with common denominators using visual fraction models. Decompose non-unit fractions to represent them as iterations of unit fractions. (E)	**Bridges in Mathematics** Unit 3: M1 S5; M2 S2; M2 S4; M2 S5; M2 S6	**Number Corner** November: Calendar Collector January: Calendar Collector February: Number Strings
4.CA.7	Add and subtract mixed numbers with common denominators (e.g., by replacing each mixed number with an equivalent fraction and/or by using properties of operations and the relationship between addition and subtraction).	**Bridges in Mathematics** Unit 3: M2 S3; M2 S4; M2 S5; M2 S6 Unit 6: M4 S3	**Number Corner** March: Calendar Collector April: Computational Fluency

Standard	Descriptor	Citations	
Computation and Algebraic Thinking			
4.CA.8	Solve real-world problems involving addition and subtraction of fractions referring to the same whole and having common denominators (e.g., by using visual fraction models and equations to represent the problem). (E)	**Bridges in Mathematics** Unit 3: M2 S5; M2 S6 Unit 6: M4 S2	
4.CA.9	Describe the relationship between two terms and use it to find a second number when a first number is given. Generate a number pattern that follows a given rule.	**Bridges in Mathematics** Unit 1: M2 S1; M2 S2 Unit 2: M2 S5	**Number Corner** September: Calendar Grid November: Calendar Grid December: Calendar Grid January: Calendar Grid May: Calendar Grid

4 4.G — Geometry

Standard	Descriptor	Citations	
Geometry			
4.G.1	Identify, describe, and draw parallelograms, rhombuses, and trapezoids using appropriate tools (e.g., ruler, straightedge, and technology).	**Bridges in Mathematics** Unit 5: M2 S1; M2 S2; M2 S4; M2 S5; M2 S6	**Number Corner** January: Calendar Grid February: Calendar Grid March: Solving Problems
4.G.2	Identify, describe, and draw rays, angles (right, acute, obtuse), and perpendicular and parallel lines using appropriate tools (e.g., ruler, straightedge, and technology). Identify these in two-dimensional figures.	**Bridges in Mathematics** Unit 5: M1 S2; M1 S3; M1 S4; M1 S5; M2 S1; M2 S2; M2 S4; M2 S5; M2 S6 Unit 8: M2 S1; M3 S1; M3 S2; M3 S3	**Number Corner** February: Calendar Grid March: Solving Problems May: Calendar Grid
4.G.3	Classify triangles and quadrilaterals based on the presence or absence of parallel or perpendicular lines, or right, acute, or obtuse angles.	**Bridges in Mathematics** Unit 5: M1 S1; M2 S4; M2 S5; M2 S6	**Number Corner** February: Calendar Grid March: Solving Problems

4 4.M — Measurement

Standard	Descriptor	Citations	
Measurement			
4.M.1	Measure length to the nearest quarter-inch, eighth-inch, and millimeter. (E)	**Bridges in Mathematics** Unit 1: M4 S3 Unit 2: M1 S3 Unit 4: M2 S2; M3 S1; M3 S2	**Number Corner** September: Calendar Collector November: Calendar Collector January: Computational Fluency April: Calendar Collector
4.M.2	Within given measurement systems, convert larger units to smaller units, including km, m, cm; kg, g; lb, oz; l, ml; hr, min, sec., and use these conversions to solve real-world problems. (E)	**Bridges in Mathematics** Unit 1: M4 S1; M4 S2; M4 S3 Unit 2: M1 S3; M1 S4; M1 S5; M3 S4 Unit 4: M3 S1; M3 S2; M3 S3; M3 S4; M3 S5 Unit 8: M1 S3; M3 S2; M3 S3; M4 S1; M4 S2	**Number Corner** November: Calendar Collector April: Calendar Collector May: Calendar Collector, Solving Problems
4.M.3	Use the four operations to solve real-world problems involving distances, intervals of time, volumes, masses of objects, and money. Include addition and subtraction problems involving simple fractions and problems that require expressing measurements given in a larger unit in terms of a smaller unit. (E)	**Bridges in Mathematics** Unit 1: M4 S2; M4 S3 Unit 2: M1 S4; M1 S5 Unit 4: M3 S1; M3 S3; M3 S4; M3 S5 Unit 6: M4 S1; M4 S2 Unit 8: M2 S1; M3 S5; M3 S6; M4 S1; M4 S2; M4 S3	**Number Corner** November: Calendar Collector April: Calendar Collector

Standard	Descriptor	Citations	
Measurement			
4.M.4	Apply the area and perimeter formulas for rectangles to solve real-world and other mathematical problems. Investigate the area of complex shapes composed of rectangles by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts; apply this technique to solve real-world problems and other mathematical problems. (E)	**Bridges in Mathematics** Unit 2: M1 S1; M1 S3; M1 S4; M1 S5 Unit 5: M3 S1; M3 S2; M3 S3; M3 S4 Unit 6: M2 S1; M2 S2; M2 S3; M2 S4; M2 S5 Unit 7: M3 S1 Unit 8: M1 S2	**Number Corner** December: Computational Fluency January: Calendar Grid April: Calendar Grid

4 4.DA — Data Analysis

Standard	Descriptor	Citations	
Data Analysis			
4.DA.1	Formulate questions that can be addressed with data. Collect, organize, and graph data from observations, surveys, and experiments using line plots with whole number intervals, single- and scaled bar graphs, and frequency tables. Solve real-world problems by analyzing and interpreting the data using grade-level computation and comparison strategies. (E)	**Bridges in Mathematics** Unit 4: M4 S2 Unit 6: M4 S1; M4 S2 Unit 8: M1 S1; M1 S2; M1 S3; M1 S4; M2 S2; M2 S3; M2 S4; M2 S5; M3 S4	**Number Corner** April: Calendar Collector, Solving Problems May: Calendar Collector
4.DA.2	Make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Solve problems involving addition and subtraction of fractions by using data displayed in line plots.	**Bridges in Mathematics** Unit 4: M4 S2 Unit 6: M4 S1; M4 S2	**Number Corner** April: Solving Problems