bridges in mathematics

GRADE 4

Bridges in Mathematics & Number Corner Third Edition »

CORRELATIONS

» Oklahoma Standards for Mathematics

number corner

4 1. Mathematical Actions & Processes

Standard	Descriptor	Citations	
MAP Mathematical Actions & Processes			
MAP.1	Develop a deep and flexible conceptual understanding.	**Bridges in Mathematics** Teachers Guide: Unit 1: M2–S1, M3–S3, M3–S4, M4–S3 Unit 2: M1–S2, M1–S3 Unit 3: M1–S5, M2–S1, M2–S2, M3–S1, M3–S3, M4–S1 Unit 4: M1–S1, M1–S2, M1–S3, M1–S6, M3–S1, M3–S2, M4–S1 Unit 5: M3–S1, M3–S2, M3–S3, M3–S4 Unit 6: M1–S3, M2–S1, M2–S2, M2–S3, M2–S4, M2–S5 Unit 7: M1–S2, M1–S3, M1–S4, M1–S5, M1–S6, M2–S1, M2–S2, M3–S2, M3–S4, M3–S5, M4–S1, M4–S2	**Number Corner** Teachers Guide: October: Solving Problems November: Solving Problems January: Solving Problems February: Solving Problems
MAP.2	Develop accurate and appropriate procedural fluency.	**Bridges in Mathematics** Teachers Guide: Unit 1: M1–S3, M2–S1, M2–S2, M2–S5 Unit 2: M2–S3, M2–S4, M3–S4 Unit 3: M2–S5 Unit 4: M1–S4, M1–S5, M1–S6, M1–S7, M2–S1, M2–S2, M2–S3, M2–S5, M3–S2 Unit 6: M1–S1, M1–S2, M1–S3, M1–S4, M1–S4, M1–S6, M1–S7, M3–S2, M3–S3 Unit 7: M1–S7, M3–S2, M3–S3, M3–S4, M3–S5, M4–S1, M4–S2	**Number Corner** Teachers Guide: September: Computational Fluency October: Computational Fluency November: Computational Fluency December: Calendar Collector, Calendar Grid January: Calendar Grid March: Calendar Grid April: Computational Fluency May: Calendar Grid, Number Strings
MAP.3	Develop strategies for problem-solving.	**Bridges in Mathematics** Teachers Guide: 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	**Number Corner** Teachers Guide: October: Calendar Grid, Solving Problems November: Solving Problems December: Solving Problems January: Solving Problems February: Computational Fluency, Number Strings, Solving Problems

Standard	Descriptor	Citations	
MAP Mathematical Actions & Processes			
MAP.4	Develop mathematical reasoning.	**Bridges in Mathematics** Teachers Guide: Unit 3: M1–S1, M2–S6 Unit 4: M1–S6, M2–S4, M2–S5 Unit 5: M2–S3 Unit 7: M1–S2, M1–S3, M1–S4, M1–S5, M1–S6, M4–S3	**Number Corner** Teachers Guide: September: Solving Problems October: Computational Fluency November: Number Strings December: Calendar Collector January: Number Strings February: Solving Problems
MAP.5	Develop a productive mathematical disposition.	**Bridges in Mathematics** Teachers Guide: Unit 1: M2–S1, M2–S2, 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 Unit 8: M2–S1, M2–S2, M2–S3	**Number Corner** Teachers Guide: September: Computational Fluency October: Calendar Grid December: Number Strings, Solving Problems January: Calendar Collector February: Number Strings May: Number Strings
MAP.6	Develop the ability to make conjectures, model, and generalize.	**Bridges in Mathematics** Teachers Guide: Unit 1: M2–S1, M2–S2 Unit 2: M1–S3 Unit 3: M1–S5 Unit 4: M2–S3, M2–S4, M2–S5 Unit 5: M2–S2, M2–S5 Unit 6: M3–S1, M4–S3 Unit 7: M1–S5, M1–S7 Unit 8: M3–S1, M3–S5, M3–S6, M4–S3	**Number Corner** Teachers Guide: September: Computational Fluency October: Calendar Grid November: Solving Problems January: Calendar Collector February: Number Strings April: Calendar Grid May: Number Strings
MAP.7	Develop the ability to communicate mathematically.	**Bridges in Mathematics** Teachers Guide: Unit 1: M2–S1, M2–S2 Unit 2: M2–S4 Unit 4: M2–S5, M3–S1, M3–S2, M4–S1 Unit 5: M1–S4, M4–S2, M4–S3 Unit 6: M3–S3 Unit 7: M1–S2, M1–S3, M1–S4 Unit 8: M1–S3	**Number Corner** Teachers Guide: November: Number Strings December: Calendar Collector January: Calendar Grid February: Calendar Grid, Solving Problems April: Calendar Collector

4 2. Numbers & Operations

Standard	Descriptor	Citations	
4.N.1 Compare and represent whole numbers up to 1,000,000 with an emphasis on place value and equality.			
4.N.1.1	Read, write, discuss, and represent whole numbers up to 1,000,000. Representations may include numerals, words, pictures, number lines, and manipulatives.	**Bridges in Mathematics** Teachers Guide: Unit 2: M1–S2 Unit 4: M1–S1, M1–S2, M1–S3, M3–S2, M4–S1, M4–S2	**Number Corner** Teachers Guide: September: Calendar Grid October: Calendar Collector November: Computational Fluency
4.N.1.2	Use place value to describe whole numbers between 1,000 and 1,000,000 in terms of millions, hundred thousands, ten thousands, thousands, hundreds, tens, and ones with written, standard, and expanded forms.	**Bridges in Mathematics** Teachers Guide: Unit 2: M1–S2 Unit 4: M1–S1, M1–S2, M1–S3, M3–S2, M4–S1, M4–S2	**Number Corner** Teachers Guide: September: Calendar Grid October: Calendar Collector November: Computational Fluency
4.N.1.3	Applying knowledge of place value, use mental strategies (no written computations) to multiply or divide a number by 10, 100 and 1,000.	**Bridges in Mathematics** Teachers Guide: Unit 2: M1–S4, M1–S5, M2–S1, M2–S2, M2–S3, M3–S1, M3–S2, M3–S3 Unit 6: M1–S2, M1–S3 Unit 7: M3–S1, M3–S2	**Number Corner** Teachers Guide: September: Number Strings October: Number Strings, Solving Problems January: Number Stings
4.N.1.4	Use place value to compare and order whole numbers up to 1,000,000, using comparative language, numbers, and symbols.	**Bridges in Mathematics** Teachers Guide: Unit 4: M1–S1, M1–S2, M1–S3, M1–S4, M4–S1, M4–S2	**Number Corner** Teachers Guide: October: Calendar Collector November: Computational Fluency

Standard	Descriptor	Citations	
4.N.2 Solve real-world and mathematical problems using multiplication and division.			
4.N.2.1	Demonstrate fluency with multiplication and division facts with factors up to 12.	**Bridges in Mathematics** Teachers Guide: Unit 1: M1–S1, M1–S2, M1–S3, M1–S4, M2–S3, M2–S4, M2–S5, M2–S6, M3–S1, M3–S2, M3–S3, M3–S4 Unit 2: M1–S4, M1–S5, M2–S1, M2–S2, M2–S3, M2–S4, M2–S5, M3–S1, M3–S2, M3–S3, M3–S5 Unit 5: M3–S1 Unit 6: M1–S1, M1–S2, M1–S3 Unit 7: M3–S1, M3–S2, M3–S3	**Number Corner** Teachers Guide: September: Number Strings, Solving Problems October: Computational Fluency, Number Strings, Solving Problems December: Computational Fluency January: Number Stings
4.N.2.2	Multiply 3-digit by 1-digit and 2-digit by 2-digit whole numbers, using various strategies, including but not limited to standard algorithms.	**Bridges in Mathematics** Teachers Guide: Unit 2: M1–S4, M1–S5, M2–S3, M3–S1, M3–S2, M3–S3 Unit 5: M3–S1 Unit 6: M1–S1, M1–S2, M1–S3 Unit 7: M3–S1, M3–S2, M3–S4, M4–S1, M4–S2, M4–S3	
4.N.2.3	Estimate products of 3-digit by 1-digit and 2-digit by 2-digit whole number factors using a variety of strategies (e.g., rounding, front end estimation, adjusting, compatible numbers) to assess the reasonableness of results. Explore larger numbers using technology to investigate patterns.	**Bridges in Mathematics** Teachers Guide: Unit 2: M1–S4, M1–S5, M2–S3, M3–S1, M3–S2, M3–S3 Unit 6: M1–S1, M1–S2, M1–S3 Unit 7: M3–S1, M3–S2, M3–S4, M4–S1, M4–S2, M4–S3	

Standard	Descriptor	Citations	
4.N.2 Solve real-world and mathematical problems using multiplication and division.			
4.N.2.4	Apply and analyze models to solve multi-step problems requiring the use of addition, subtraction, and multiplication of multi- digit whole numbers. Use various strategies, including the relationship between operations, the use of appropriate technology, and the context of the problem to assess the reasonableness of results.	**Bridges in Mathematics** Teachers Guide: Unit 4: M1–S5, M1–S6 Unit 6: M3–S1, M3–S2, M3–S3 Unit 7: M3–S5, M4–S1	**Number Corner** Teachers Guide: October: Solving Problems November: Solving Problems January: Solving Problems February: Solving Problems
4.N.2.5	Use strategies and algorithms (e.g., mental strategies, standard algorithms, partial quotients, repeated subtraction, the commutative, associative, and distributive properties) based on knowledge of place value, equality, and properties of operations to divide a 3-digit dividend by a 1-digit whole number divisor, with and without remainders.	**Bridges in Mathematics** Teachers Guide: Unit 6: M1–S4, M1–S5, M1–S6, M1–S7, M3–S1, M3–S2, M3–S3, M3–S4, M3–S5	**Number Corner** Teachers Guide: January: Number Strings, Solving Problems April: Number Strings

Standard	Descriptor	Citations	
4.N.3 Represent and compare fractions and decimals in real-world and mathematical situations; use place value to understand decimal quantities.			
4.N.3.1	Represent and rename equivalent fractions using fraction models (e.g., parts of a set, area models, fraction strips, number lines).	**Bridges in Mathematics** Teachers Guide: Unit 3: M1–S3, M1–S4, M1–S5, M1–S6, M2–S1, M2–S3 Unit 7: M1–S1, M1–S2, M1–S3, M1–S4, M1–S5, M1–S6, M1–S7 Unit 8: M1–S2	**Number Corner** Teachers Guide: September: Calendar Collector January: Computational Fluency February: Computational Fluency, Number Strings March: Calendar Collector, Computational Fluency, Number Strings April: Computational Fluency May: Number Strings
4.N.3.2	Use benchmark fractions (0, 1/4, 1/3, 1/2, 2/3 , 3/4, 1) to locate additional fractions with denominators up to twelfths on a number line.	**Bridges in Mathematics** Teachers Guide: Unit 3: M1–S3, M1–S4, M2–S3 Unit 7: M1–S1, M1–S2, M1–S3, M1–S4	
4.N.3.3	Use models to order and compare whole numbers and fractions less than and greater than one, using comparative language and symbols.	**Bridges in Mathematics** Teachers Guide: Unit 3: M1–S1, M1–S2, M1–S3, M1–S4, M2–S3, M4–S3 Unit 4: M1–S1, M1–S2, M1–S3, M4–S1, M4–S2 Unit 7: M1–S2, M1–S3, M1–S4, M1–S5, M1–S6, M1–S7, M2–S2, M2–S4	**Number Corner** Teachers Guide: October: Calendar Collector November: Computational Fluency January: Computational Fluency
4.N.3.4	Decompose a fraction into a sum of fractions with the same denominator in more than one way, using concrete and pictorial models and recording results with numerical representations (e.g., 3/4 = 1/4 + 1/4 + 1/4 and 3/4 = 2/4 + 1/4).	**Bridges in Mathematics** Teachers Guide: Unit 3: M1–S5, M2–S2, M2–S4, M2–S5, M2–S6	**Number Corner** Teachers Guide: November: Calendar Collector January: Calendar Collector February: Number Strings

Standard	Descriptor	Citations	
4.N.3 Represent and compare fractions and decimals in real-world and mathematical situations; use place value to understand decimal quantities.			
4.N.3.5	Use models to add and subtract fractions with like denominators.	**Bridges in Mathematics** Teachers Guide: Unit 3: M2–S2, M2–S3, M2–S4, M2–S5, M2–S6 Unit 6: M4–S3	**Number Corner** Teachers Guide: November: Calendar Collector January: Calendar Collector February: Number Strings March: Calendar Collector April: Computational Fluency
4.N.3.6	Represent tenths and hundredths with concrete and pictorial models, making connections between fractions and decimals.	**Bridges in Mathematics** Teachers Guide: Unit 3: M3–S1, M3–S2, M3–S3, M4–S1, M4–S2 Unit 7: M2–S1, M2–S3	**Number Corner** Teachers Guide: October: Calendar Grid February: Computational Fluency March: Computational Fluency May: Computational Fluency
4.N.3.7	Read and write decimals in standard, word, and expanded form up to at least the hundredths place in a variety of contexts, including money.	**Bridges in Mathematics** Teachers Guide: Unit 3: M3–S1, M3–S2, M3–S3, M4–S1, M4–S2 Unit 7: M2–S1, M2–S3	**Number Corner** Teachers Guide: October: Calendar Grid February: Computational Fluency March: Computational Fluency May: Computational Fluency
4.N.3.8	Compare and order decimals and whole numbers using place value and various models including but not limited to grids, number lines, and base 10 blocks.	**Bridges in Mathematics** Teachers Guide: Unit 3: M3–S2, M3–S4, M4–S2, M4–S3 Unit 7: M2–S3	**Number Corner** Teachers Guide: February: Computational Fluency March: Computational Fluency May: Computational Fluency
4.N.3.9	Compare and order benchmark fractions (0, 1/4, 1/3 , 1/2 , 2/3, 3/4, 1) and decimals (0, 0.25, 0.50, 0.75, 1.00) in a variety of representations.	*Students compare and order additional benchmark fractions and decimals beyond what's listed in the standard.* **Bridges in Mathematics** Teachers Guide: Unit 3: M1–S1, M1–S3, M1–S4, M2–S3, M3–S2, M3–S4 Unit 7: M1–S2, M1–S3, M1–S4, M1–S6, M2–S3, M3–S3	**Number Corner** Teachers Guide: February: Computational Fluency March: Computational Fluency May: Computational Fluency

Standard	Descriptor	Citations
4.N.4 Determine the value of bills and coins in order to solve monetary transactions.		
4.N.4.1	Select the fewest number of coins for a given amount of money up to one dollar.	*This standard is beyond the scope of the grade 4 curriculum.*
4.N.4.2	Given a total cost (dollars and coins up to twenty dollars) and amount paid (dollars and coins up to twenty dollars), find the change required in a variety of ways.	*This standard is beyond the scope of the grade 4 curriculum.*

4 3. Algebraic Reasoning & Algebra

Standard	Descriptor	Citations	
4.A.1 Describe, create, and analyze multiple representations of patterns to solve real-world and mathematical problems.			
4.A.1.1	Create an input/output chart or table to represent or extend a numerical pattern.	*Students do not represent numerical patterns in input/output tables in Bridges in Mathematics TG.*	
		Bridges in Mathematics Teachers Guide: Unit 1: M2–S1, M2–S2 Unit 2: M2–S5	**Number Corner** Teachers Guide: September: Calendar Grid December: Calendar Grid January: Calendar Grid May: Calendar Grid
4.A.1.2	Describe the single operation rule for a pattern from an input/output table or function machine involving any operation of a whole number.	**Bridges in Mathematics** Teachers Guide: Unit 1: M2–S1, M2–S2 Unit 2: M2–S5	**Number Corner** Teachers Guide: September: Calendar Grid December: Calendar Grid January: Calendar Grid May: Calendar Grid
4.A.1.3	Construct models to show growth patterns involving geometric shapes and define the single operation rule of the pattern.	*This standard is beyond the scope of the grade 4 curriculum.*	

Standard	Descriptor	Citations	
4.A.2 Use multiplication and division with variables to create number sentences representing a given mathematical situation.			
4.A.2.1	Use the relationships between multiplication and division with the properties of multiplication to solve problems and find values for variables that make number sentences true.	**Bridges in Mathematics** Teachers Guide: Unit 1: M1–S5, M1–S6 Unit 2: 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–S2	**Number Corner** Teachers Guide: January: Number Strings, Solving Problems April: Number Strings
4.A.2.2	Solve for a variable in an equation involving addition, subtraction, multiplication, or division with whole numbers. Analyze models to represent number sentences and vice versa.	*This standard is beyond the scope of the grade 4 curriculum.*	
4.A.2.3	Determine the unknown addend or factor in equivalent and non-equivalent expressions (e.g., 5 + 6 = 4 + ____, 3 × 8 < 3 ×____.)	**Bridges in Mathematics** Teachers Guide: Unit 2: M1–S4 Unit 6: M1–S6 Unit 7: M3–S1	

4 4. Geometry & Measurement

Standard	Descriptor	Citations	
4.GM.1	Name, describe, classify, and construct polygons and three-dimensional figures based on their attributes; recognize polygons and three-dimensional figures in real-life and mathematical situations.		
4.GM.1.1	Identify points, lines, line segments, rays, angles, endpoints, and parallel and perpendicular lines in various models.	**Bridges in Mathematics** Teachers Guide: Unit 5: M1–S2, M1–S3, M1–S4, M1–S5, M2–S1, M2–S2, M2–S4, M2–S5, M2–S6	**Number Corner** Teachers Guide: February: Calendar Grid
4.GM.1.2	Describe, classify, and construct quadrilaterals, including squares, rectangles, trapezoids, rhombuses, parallelograms, and kites. Recognize quadrilaterals in various models.	**Bridges in Mathematics** Teachers Guide: Unit 5: M1–S1, M2–S4, M2–S5, M2–S6	**Number Corner** Teachers Guide: February: Calendar Grid March: Solving Problems
4.GM.1.3	Given two three-dimensional shapes, identify each shape. Compare and contrast their similarities and differences based on their attributes.	*This standard is beyond the scope of the grade 3 curriculum.*	

Standard	Descriptor	Citations	
4.GM.2 Recognize and measure attributes in real-world and mathematical situations using various tools.			
4.GM.2.1	Measure angles in geometric figures and real-world objects with a protractor or angle ruler.	**Bridges in Mathematics** Teachers Guide: Unit 5: M1–S4, M1–S5, M1–S6, M4–S1, M4–S2, M4–S3 Unit 8: M1–S4, M1–S5, M1–S6, M4–S1	**Number Corner** Teachers Guide: February: Calendar Collector
4.GM.2.2	Find the area of polygons by determining if they can be decomposed into rectangles.	**Bridges in Mathematics** Teachers Guide: Unit 5: M3–S4 (composite shapes)	
4.GM.2.3	Develop the concept that the volume of rectangular prisms with whole-number edge lengths can be found by counting the total number of same-sized unit cubes that fill a shape without gaps or overlaps. Use a variety of tools and create models to determine the volume using appropriate measurements (e.g., cm^3).	*This standard is beyond the scope of the grade 4 curriculum.*	
4.GM.2.4	Choose an appropriate instrument to measure the length of an object to the nearest whole centimeter or quarter inch.	**Bridges in Mathematics** Teachers Guide: Unit 1: M4–S3 Unit 2: M1–S3 Unit 4: M2–S2	**Number Corner** Teachers Guide: September: Calendar Collector January: Computational Fluency April: Calendar Collector

Standard	Descriptor	Citations	
4.GM.2 Recognize and measure attributes in real-world and mathematical situations using various tools.			
4.GM.2.5	Recognize and use the relationship between inches, feet, and yards to measure and compare objects.	**Bridges in Mathematics** Teachers Guide: Unit 1: M4–S3 Unit 4: M3–S1 Unit 8: M3–S2, M3–S3, M4–S1, M4–S2	
4.GM.2.6	Recognize and use the relationship between millimeters, centimeters, and meters to measure and compare objects.	**Bridges in Mathematics** Teachers Guide: Unit 1: M4–S3 Unit 2: M1–S3, M1–S4, M1–S5, M3–S4 Unit 4: M3–S1, M3–S2 Unit 8: M4–S1, M4–S2	
4.GM.2.7	Determine and justify the best use of customary and metric measurements in a variety of situations (liquid volumes, mass vs. weight, temperatures above 0 (zero) degrees, and length).	**Bridges in Mathematics** Teachers Guide: Unit 1: M4–S1, M4–S2 Unit 4: M3–S1, M3–S2, M3–S4, M3–S5 Unit 6: M4–S1, M4–S2 Unit 8: M3–S2, M3–S3, M4–S1, M4–S2	**Number Corner** Teachers Guide: November: Calendar Collector April: Calendar Collector May: Calendar Collector, Solving Problems

Standard	Descriptor	Citations	
4.GM.3 Determine elapsed time and convert between units of time.			
4.GM.3.1	Determine elapsed time.	**Bridges in Mathematics** Teachers Guide: Unit 4: M3–S3	**Number Corner** Teachers Guide: November: Calendar Grid
4.GM.3.2	Convert one measure of time to another including seconds to minutes, minutes to hours, hours to days, and vice versa, using various models.	**Bridges in Mathematics** Teachers Guide: Unit 4: M3–S1, M3–S2, M3–S3	**Number Corner** Teachers Guide: November: Calendar Grid

4 5. Data & Probability

Standard	Descriptor	Citations	
4.D.1 Summarize, construct, and analyze data.			
4.D.1.1	Create and organize data on a frequency table or line plot marked with whole numbers and fractions using appropriate titles, labels, and units.	*Students do not use frequency tables to organize data.*	
		Bridges in Mathematics Teachers Guide: Unit 4: M4–S2 Unit 6: M4–S1, M4–S2	**Number Corner** Teachers Guide: April: Solving Problems
4.D.1.2	Organize data sets to create tables, bar graphs, timelines, and Venn diagrams. The data may include benchmark fractions or decimals (1/4, 1/3, 1/2 , 2/3, 3/4, 0.25, 0.50, 0.75).	*Students do not use timelines or Venn diagrams to organize data.*	
		Bridges in Mathematics Teachers Guide: Unit 4: M4–S1, M4–S2 Unit 8: M1–S1, M1–S3, M1–S4, M2–S4, M2–S5, M3–S4 (scatterplot)	
4.D.1.3	Solve one- and two-step problems by analyzing data in whole number, decimal, or fraction form in a frequency table and line plot.	*Students do not analyze data in frequency tables to solve problems.*	
		Bridges in Mathematics Teachers Guide: Unit 4: M4–S1, M4–S2 Unit 6: M4–S1, M4–S2 Unit 8: M1–S1, M1–S3, M1–S4, M2–S4, M2–S5, M3–S4 (scatterplot)	**Number Corner** Teachers Guide: April: Calendar Collector, Solving Problems May: Calendar Collector