bridges in mathematics

GRADE 5

Bridges & Number Corner Third Edition

CORRELATIONS

Common Core Standards for Mathematics

number corner

5 Standards for Mathematical Practice

Standard	Descriptor	Citations	
SMP Standards for Mathematical Practice			
SMP.1	Make sense of problems and persevere in solving them.	**Bridges in Mathematics** Unit 1: M1 S2; M3 S2 Unit 2: M1 S2; M2 S6; M3 S1 Unit 3: M1 S2; M4 S2 Unit 4: M1 S1; M2 S1; M3 S7 Unit 5: M1 S3; M2 S1; M3 S4 Unit 6: M1 S1; M2 S4; M4 S1 Unit 7: M1 S2; M2 S1 Unit 8: M2 S4; M4 S2	**Number Corner** October: Solving Problems November: Solving Problems December: Solving Problems January: Solving Problems March: Number Strings April: Solving Problems May: Solving Problems
SMP.2	Reason abstractly and quantitatively.	**Bridges in Mathematics** Unit 1: M1 S1; M3 S3; M4 S4 Unit 2: M1 S4; M3 S5 Unit 3: M1 S1; M2 S4; M4 S1 Unit 4: M2 S4; M3 S7; M4 S1 Unit 5: M1 S2; M2 S1; M3 S4 Unit 6: M1 S5; M3 S1 Unit 7: M1 S5; M2 S2 Unit 8: M2 S1; M4 S1	**Number Corner** September: Calendar Grid October: Computational Fluency November: Computational Fluency December: Solving Problems January Solving Problems February: Calendar Collector March: Computational Fluency April: Computational Fluency May: Calendar Collector, Solving Problems
SMP.3	Construct viable arguments and critique the reasoning of others.	**Bridges in Mathematics** Unit 1: M1 S1; M2 S4 Unit 2: M2 S2; M3 S5 Unit 3: M2 S6; M3 S4; M4 S2 Unit 4: M2 S1; M3 S5 Unit 5: M3 S1 Unit 6: M1 S5; M2 S2; M3 S2 Unit 7: M1 S3; M2 S2 Unit 8: M3 S3; M4 S3	**Number Corner** September: Calendar Grid, Solving Problems October: Computational Fluency November: Calendar Grid

Standard	Descriptor	Citations	
SMP Standards for Mathematical Practice			
SMP.4	Model with mathematics.	**Bridges in Mathematics** Unit 1: M4 S5 Unit 2: M3 S1; M3 S3 Unit 3: M1 S4; M3 S4 Unit 4: M2 S2 Unit 5: M2 S5; M4 S1 Unit 6: M1 S2; M1 S3; M2 S1 Unit 7: M2 S3; M3 S4 Unit 8: M3 S1	**Number Corner** September: Solving Problems December: Calendar Collector March: Calendar Collector April: Calendar Collector, Solving Problems
SMP.5	Use appropriate tools strategically.	**Bridges in Mathematics** Unit 2: M1 S1; M2 S1; M3 S3 Unit 3: M4 S1 Unit 4: M2 S3 Unit 5: M2 S2; M4 S4 Unit 6: M1 S2; M2 S3 Unit 7: M2 S3; M4 S2 Unit 8: M1 S1; M4 S2	**Number Corner** October: Solving Problems, Number Strings November: Number Strings January: Number Strings February: Calendar Grid, Number Strings March: Number Strings April: Number Strings May: Calendar Grid
SMP.6	Attend to precision.	**Bridges in Mathematics** Unit 1: M1 S3; M3 S5 Unit 2: M2 S5; M4 S4 Unit 3: M1 S1; M2 S1; M3 S1 Unit 4: M1 S3; M3 S1 Unit 6: M1 S1; M3 S3 Unit 7: M2 S1 Unit 8: M1 S1 M4 S2	**Number Corner** September: Computational Fluency October: Computational Fluency November: Computational Fluency December: Calendar Collector January: Calendar Collector February: Computational Fluency, Solving Problems March: Calendar Collector April: Calendar Collector, Computational Fluency May: Computational Fluency

Standard	Descriptor	Citations	
SMP Standards for Mathematical Practice			
SMP.7	Look for and make use of structure.	**Bridges in Mathematics** Unit 1: M1 S5; M2 S1 Unit 2: M1 S2; M3 S2; M4 S1 Unit 3: M1 S1; M2 S1; M4 S3 Unit 4: M3 S2 Unit 5: M1 S5; M4 S1 Unit 6: M1 S4; M2 S3 Unit 7: M3 S1; M4 S1	**Number Corner** September: Calendar Collector October: Calendar Collector November: Calendar Grid, Calendar Collector January: Calendar Grid, Number Strings February: Calendar Grid, Number Strings March: Calendar Grid, Number Strings April: Calendar Grid, Number Strings May: Calendar Grid, Number Strings
SMP.8	Look for and express regularity in repeated reasoning.	**Bridges in Mathematics** Unit 1: M1 S2; M1 S4; M1 S5; M2 S1 Unit 2: M1 S1 Unit 3: M1 S3; M2 S6; M4 S3 Unit 4: M3 S2 Unit 5: M1 S4; M2 S4 Unit 6: M1 S4 Unit 7 M3 S1	**Number Corner** September: Calendar Collector, Computational Fluency October: Number Strings November: Calendar Collector December: Calendar Grid January: Calendar Grid, Computational Fluency March: Calendar Grid April: Calendar Grid

5 Operations and Algebraic Thinking

Standard	Descriptor	Citations	
5.OA.A Write and interpret numerical expressions.			
5.OA.A.1	Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.	**Bridges in Mathematics** Unit 1: M1 S5; M2 S1; M2 S2; M2 S4; M3 S1; M3 S3; M3 S4 Unit 4: M3 S1 Unit 6: M1 S2; M1 S3 Unit 7: M1 S5	**Number Corner** September: Calendar Collector October: Computational Fluency November: Computational Fluency
5.OA.A.2	Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them.	**Bridges in Mathematics** Unit 1: M1 S4; M1 S5; M3 S3; M2 S1 Unit 8: M1 S1	**Number Corner** September: Calendar Collector November: Computational Fluency May: Solving Problems
5.OA.B Analyze patterns and relationships.			
5.OA.B.3	Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane.	**Bridges in Mathematics** Unit 6: M1 S1; M1 S2; M1 S3; M1 S4; M1 S5; M1 S6; M1 S7	**Number Corner** October: Solving Problems January: Calendar Grid

5 Number and Operations in Base Ten

Standard	Descriptor	Citations	
5.NBT.A Understand the place value system.			
5.NBT.A.1	Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left.	**Bridges in Mathematics** Unit 3: M1 S3; M1 S4; M1 S5; M2 S1 Unit 7: M3 S2	**Number Corner** November: Calendar Collector February: Solving Problems March: Calendar Grid
5.NBT.A.2	Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.	**Bridges in Mathematics** Unit 3: M1 S3; M1 S4; M3 S1 Unit 6: M1 S2 Unit 7: M3 S1; M3 S2; M3 S3	**Number Corner** November: Calendar Collector February: Calendar Collector, Solving Problems

Standard	Descriptor	Citations	
5.NBT.A Understand the place value system.			
	5.NBT.A.3 Read, write, and compare decimals to thousandths.		
5.NBT.A.3a	Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g., 347.392 = 3 × 100 + 4 × 10 + 7 × 1 + 3 × (1/10) + 9 × (1/100) + 2 × (1/1000).	**Bridges in Mathematics** Unit 3: M1 S5; M2 S1; M2 S2; M2 S5; M2 S6; M2 S7 Unit 7: M3 S1; M3 S2; M3 S3	
5.NBT.A.3b	Compare two decimals to thousandths based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons.	**Bridges in Mathematics** Unit 3: M1 S5; M2 S2	**Number Corner** March: Computational Fluency
5.NBT.A.4	Use place value understanding to round decimals to any place.	**Bridges in Mathematics** Unit 3: M2 S3	
5.NBT.B Perform operations with multidigit whole numbers and with decimals to hundredths.			
5.NBT.B.5	Fluently multiply multidigit whole numbers using the standard algorithm.	**Bridges in Mathematics** Unit 4: M1 S1; M1 S2; M1 S3; M2 S4; M3 S2; M3 S3; M3 S4; M3 S5; M3 S7	**Number Corner** February: Computational Fluency March: Solving Problems

Standard	Descriptor	Citations	
5.NBT.B Perform operations with multidigit whole numbers and with decimals to hundredths.			
5.NBT.B.6	Find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.	**Bridges in Mathematics** Unit 1: M3 S1; M3 S2; M3 S4; M3 S5; M4 S1; M4 S2; M4 S3; M4 S4; M4 S5 Unit 3: M4 S1; M4 S2; M4 S3 Unit 4: M1 S1; M4 S1; M4 S2; M4 S4 Unit 7: M1 S1; M1 S4; M2 S3; M2 S4	**Number Corner** February: Computational Fluency March: Solving Problems
5.NBT.B.7	Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.	**Bridges in Mathematics** Unit 2: M3 S1 Unit 3: M1 S1; M2 S1; M2 S3; M2 S4; M3 S2; M3 S3; M3 S4 Unit 4: M1 S3; M1 S4; M2 S2; M2 S3; M2 S4 Unit 7: M3 S4; M4 S1; M4 S2; M4 S3	**Number Corner** September: Calendar Grid, Number Strings October: Solving Problems December: Solving Problems, Number Strings January: Calendar Collector, Number Strings February: Computational Fluency March: Computational Fluency, Solving Problems April: Calendar Collector

5 Number and Operations: Fractions

Standard	Descriptor	Citations	
5.NF.A Use equivalent fractions as a strategy to add and subtract fractions.			
5.NF.A.1	Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators.	**Bridges in Mathematics** Unit 2: M1 S1; M1 S2; M1 S3; M1 S4; M1 S5; M2 S1; M2 S3; M2 S6; M3 S2; M3 S4; M3 S5; M4 S1; M4 S2 Unit 3: M1 S2 Unit 5: M1 S2; M1 S4	**Number Corner** October: Computational Fluency, Number Strings November: Number Strings December: Computational Fluency January: Computational Fluency March: Calendar Collector, Number Strings April: Computational Fluency May: Computational Fluency
5.NF.A.2	Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, e.g., by using visual fraction models or equations to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers.	**Bridges in Mathematics** Unit 2: M2 S2; M2 S3; M2 S4; M3 S3; M3 S4; M4 S3	**Number Corner** December: Computational Fluency January: Calendar Collector March: Calendar Collector April: Solving Problems

Standard	Descriptor	Citations	
5.NF.B Apply and extend previous understandings of multiplication and division to multiply and divide fractions.			
5.NF.B.3	Interpret a fraction as division of the numerator by the denominator ($a/b = a \div b$). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers, e.g., by using visual fraction models or equations to represent the problem.	**Bridges in Mathematics** Unit 1: M4 S3 Unit 2: M2 S5; M3 S1 Unit 7: M1 S2; M1 S3; M2 S5; M2 S6	**Number Corner** March: Computational Fluency
5.NF.B.4 Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction.			
5.NF.B.4a	Interpret the product $(a/b) \times q$ as a parts of a partition of q into b equal parts; equivalently, as the result of a sequence of operations $a \times q \div b$.	**Bridges in Mathematics** Unit 2: M2 S1; M2 S2; M2 S3; M3 S4 Unit 4: M1 S4; M2 S1; M2 S2 Unit 5: M1 S2; M1 S3; M1 S4; M1 S5; M2 S1; M2 S2; M2 S3; M2 S5; M3 S2 Unit 7: M1 S6; M3 S2 Unit 8: M2 S3; M2 S4; M2 S5; M3 S2; M3 S3; M3 S4; M3 S5	**Number Corner** November: Solving Problems January: Calendar Collector, Computational Fluency February: Number Strings April: Computational Fluency May: Computational Fluency
5.NF.B.4b	Find the area of a rectangle with fractional side lengths by tiling it with unit squares of the appropriate unit fraction side lengths, and show that the area is the same as would be found by multiplying the side lengths. Multiply fractional side lengths to find areas of rectangles, and represent fraction products as rectangular areas.	**Bridges in Mathematics** Unit 5: M2 S1; M2 S2; M2 S5; M3 S2; M3 S4 Unit 6: M4 S1; M4 S2; M4 S3 Unit 8: M2 S4; M2 S5; M3 S2; M3 S3; M3 S4	**Number Corner** February: Calendar Grid April: Number Strings May: Number Strings

Standard	Descriptor	Citations	
5.NF.B Apply and extend previous understandings of multiplication and division to multiply and divide fractions.			
	5.NF.B.5 Interpret multiplication as scaling (resizing), by:		
5.NF.B.5a	Comparing the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication.	**Bridges in Mathematics** Unit 5: M1 S3; M2 S4; M3 S3	**Number Corner** February: Number Strings May: Computational Fluency
5.NF.B.5b	Explaining why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case); explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number; and relating the principle of fraction equivalence $a/b = (n \times a)/(n \times b)$ to the effect of multiplying a/b by 1.	**Bridges in Mathematics** Unit 5: M1 S3; M2 S4; M3 S3	**Number Corner** February: Number Strings May: Computational Fluency
5.NF.B.6	Solve real world problems involving multiplication of fractions and mixed numbers, e.g., by using visual fraction models or equations to represent the problem.	**Bridges in Mathematics** Unit 2: M2 S4 Unit 5: M1 S2; M1 S3; M1 S4; M2 S3; M2 S5; M3 S1; M3 S2 Unit 6: M4 S1; M4 S2; M4 S3 Unit 7: M1 S6 Unit 8: M1 S1; M3 S3; M3 S4; M3 S5	**Number Corner** November: Solving Problems April: Calendar Collector, Number Strings

Standard	Descriptor	Citations	
5.NF.B Apply and extend previous understandings of multiplication and division to multiply and divide fractions.			
	5.NF.B.7 Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions.		
5.NF.B.7a	Interpret division of a unit fraction by a non-zero whole number, and compute such quotients.	**Bridges in Mathematics** Unit 5: M4 S4; M4 S5 Unit 7: M1 S2; M1 S3; M2 S1; M2 S2 Unit 8: M3 S4	**Number Corner** April: Number Strings May: Number Strings
5.NF.B.7b	Interpret division of a whole number by a unit fraction, and compute such quotients.	**Bridges in Mathematics** Unit 5: M4 S2; M4 S3; M4 S4; M4 S5 Unit 7: M1 S2; M1 S3; M2 S1; M2 S2 Unit 8: M3 S4	**Number Corner** April: Number Strings May: Number Strings
5.NF.B.7c	Solve real world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions, e.g., by using visual fraction models and equations to represent the problem.	**Bridges in Mathematics** Unit 5: M4 S2; M4 S3; M4 S4; M4 S5 Unit 7: M1 S2; M2 S1; M2 S2 Unit 8: M3 S4	

5 Measurement and Data

Standard	Descriptor	Citations	
5.MD.A Convert like measurement units within a given measurement system.			
5.MD.A.1	Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multistep, real-world problems.	**Bridges in Mathematics** Unit 3: M2 S7; M3 S1; M3 S2; M3 S3 Unit 4: M4 S3 Unit 6: M4 S3 Unit 8: M1 S1; M2 S3; M2 S5; M3 S3	**Number Corner** May: Calendar Collector
5.MD.B Represent and interpret data.			
5.MD.B.2	Make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Use operations on fractions for this grade to solve problems involving information presented in line plots.	**Bridges in Mathematics** Unit 6: M4 S2; M4 S3 Unit 8: M1 S3	**Number Corner** December: Calendar Collector March: Calendar Collector May: Calendar Collector

Standard	Descriptor	Citations	
5.MD.C Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.			
	5.MD.C.3 Recognize volume as an attribute of solid figures and understand concepts of volume measurement.		
5.MD.C.3a	A cube with side length 1 unit, called a "unit cube," is said to have "one cubic unit" of volume, and can be used to measure volume.	**Bridges in Mathematics** Unit 1: M1 S4; M1 S5; M2 S1; M2 S2 Unit 6: M3 S1; M3 S2	**Number Corner** October: Calendar Grid January: Solving Problems April: Calendar Grid
5.MD.C.3b	A solid figure which can be packed without gaps or overlaps using *n* unit cubes is said to have a volume of *n* cubic units.	**Bridges in Mathematics** Unit 1: M1 S5; M2 S1; M2 S2 Unit 6: M3 S1; M3 S2	**Number Corner** October: Calendar Grid January: Solving Problems April: Calendar Grid
5.MD.C.4	Measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and improvised units.	**Bridges in Mathematics** Unit 1: M1 S5; M2 S2 Unit 6: M3 S1; M3 S2	**Number Corner** September: Calendar Collector October: Calendar Grid January: Solving Problems April: Calendar Grid

Standard	Descriptor	Citations	
5.MD.C Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.			
	5.MD.C.5 Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume.		
5.MD.C.5a	Find the volume of a right rectangular prism with whole-number side lengths by packing it with unit cubes, and show that the volume is the same as would be found by multiplying the edge lengths, equivalently by multiplying the height by the area of the base. Represent threefold whole-number products as volumes, e.g., to represent the associative property of multiplication.	**Bridges in Mathematics** Unit 1: M1 S5; M2 S1; M2 S2 Unit 6: M3 S1; M3 S2	**Number Corner** September: Calendar Collector January: Solving Problems April: Calendar Grid
5.MD.C.5b	Apply the formulas $V = l \times w \times h$ and $V = b \times h$ for rectangular prisms to find volumes of right rectangular prisms with whole number edge lengths in the context of solving real-world and math problems.	**Bridges in Mathematics** Unit 1: M1 S5 Unit 6: M3 S1; M3 S2; M3 S3; M3 S4; M3 S5 Unit 8: M1 S5; M1 S6; M2 S2; M3 S3	
5.MD.C.5c	Recognize volume as additive. Find volumes of solid figures composed of two non-overlapping right rectangular prisms by adding the volumes of the non-overlapping parts, applying this technique to solve real-world problems.	**Bridges in Mathematics** Unit 1: M1 S5; M2 S1; M2 S2 Unit 6: M3 S1	**Number Corner** October: Calendar Grid

5 Geometry

Standard	Descriptor	Citations	
5.G.A Graph points on the coordinate plane to solve real-world and mathematical problems.			
5.G.A.1	Use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates. Understand that the first number indicates how far to travel from the origin in the direction of one axis, and the second number indicates how far to travel in the direction of the second axis, with the convention that the names of the two axes and the coordinates correspond (e.g., x-axis and x-coordinate, y-axis and y-coordinate)	**Bridges in Mathematics** Unit 6: M1 S1; M1 S2; M1 S3	**Number Corner** October: Calendar Collector November: Calendar Grid December: Calendar Collector May: Calendar Grid

Standard	Descriptor	Citations	
5.G.A Graph points on the coordinate plane to solve real-world and mathematical problems.			
5.G.A.2	Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.	**Bridges in Mathematics** Unit 6: M1 S3; M1 S4; M1 S5; M1 S6 Unit 8: M1 S2; M1 S3; M1 S4; M2 S1; M2 S2; M2 S4; M2 S6; M3 S1; M4 S1	
5.G.B Classify two-dimensional figures into categories based on their properties.			
5.G.B.3	Understand that attributes belonging to a category of two dimensional figures also belong to all subcategories of that category.	**Bridges in Mathematics** Unit 6: M2 S1; M2 S2; M2 S3; M2 S4	**Number Corner** December: Calendar Grid
5.G.B.4	Classify two-dimensional figures in a hierarchy based on properties.	**Bridges in Mathematics** Unit 6: M2 S1; M2 S2; M2 S3; M2 S4; M3 S5	**Number Corner** November: Calendar Grid December: Calendar Grid