bridges in mathematics

GRADE 4

Bridges & Number Corner Third Edition

CORRELATIONS

New Jersey Standards for Mathematics

number corner

4 SMP — 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 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
SMP.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
SMP.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
SMP.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	
SMP Standards for Mathematical Practice			
SMP.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
SMP.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
SMP.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
SMP.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 OA — Operations and Algebraic Thinking

Standard	Descriptor	Citations	
4.OA.A Use the four operations with whole numbers to solve problems.			
4.OA.A.1	Interpret a multiplication equation as a comparison, e.g., interpret 35 = 5 × 7 as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations.	**Bridges in Mathematics** Unit 1: M1 S1; M1 S4; M3 S3; M3 S4	**Number Corner** November: Calendar Collector January: Calendar Grid April: Calendar Collector
4.OA.A.2	Multiply or divide to solve word problems 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.	**Bridges in Mathematics** Unit 1: M1 S1; M1 S2; M1 S3; M1 S4; M3 S3 Unit 7: M3 S1	**Number Corner** September: Solving Problems

Standard	Descriptor	Citations	
4.OA.A Use the four operations with whole numbers to solve problems.			
4.OA.A.3	Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.	**Bridges in Mathematics** Unit 4: M1 S5; M1 S6 Unit 6: M3 S1; M3 S2; M3 S3; M3 S4 Unit 7: M3 S4; M3 S5; M4 S1	**Number Corner** October: Solving Problems November: Solving Problems January: Solving Problems February: Solving Problems
4.OA.B Gain familiarity with factors and multiples.			
4.OA.B.4	Find all factor pairs for a whole number in the range 1–100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1–100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1–100 is prime or composite.	**Bridges in Mathematics** Unit 1: M2 S1; M2 S2; M2 S5; M3 S1; M3 S2 Unit 2: M4 S4	**Number Corner** September: Computational Fluency October: Computational Fluency November: Computational Fluency December: Computational Fluency

Standard	Descriptor	Citations	
4.OA.C Generate and analyze patterns.			
4.OA.C.5	Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself.	**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 NBT — Number and Operations in Base Ten

Standard	Descriptor	Citations	
4.NBT.A Generalize place value understanding for multidigit whole numbers.			
4.NBT.A.1	Recognize that in a multidigit whole number, a digit in one place represents ten times what it represents in the place to its right.	**Bridges in Mathematics** Unit 2: M1 S1; M1 S2 Unit 4: M1 S2; M1 S3; M1 S5; M2 S3; M2 S4; M2 S5	**Number Corner** September: Calendar Grid October: Calendar Collector
4.NBT.A.2	Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multidigit numbers based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons.	**Bridges in Mathematics** Unit 4: M1 S1; M1 S2; M1 S3; M4 S1; M4 S2	**Number Corner** October: Calendar Collector November: Computational Fluency December: Calendar Collector
4.NBT.A.3	Use place value understanding to round multidigit whole numbers to any place.	**Bridges in Mathematics** Unit 4: M1 S1; M1 S3; M1 S4; M3 S1; M4 S1; M4 S2	**Number Corner** November: Solving Problems
4.NBT.B Use place value understanding and properties of operations to perform multidigit arithmetic.			
4.NBT.B.4	With accuracy and efficiency, add and subtract multidigit whole numbers using the standard algorithm.	**Bridges in Mathematics** Unit 4: M1 S4; M1 S5. M1 S6; M1 S7; M2 S1; M2 S2; M2 S3; M2 S4; M2 S5	**Number Corner** November: Number Strings December: Number Strings

Standard	Descriptor	Citations	
4.NBT.B Use place value understanding and properties of operations to perform multidigit arithmetic.			
4.NBT.B.5	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. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.	**Bridges in Mathematics** Unit 2: M1 S4; M1 S5; M2 S1; M2 S2; M2 S3; M3 S1; M3 S2; M3 S3 Unit 6: M1 S1; M1 S2; M1 S3 Unit 7: M3 S2; M3 S3; M3 S4; M4 S2; M4 S3	**Number Corner** September: Number Strings, Solving Problems October: Number Strings
4.NBT.B.6	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. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area model.	**Bridges in Mathematics** 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	**Number Corner** January: Number Strings, Solving Problems April: Number Strings

4 NF — Number and Operations: Fractions

Standard	Descriptor	Citations	
4.NF.A Extend understanding of fraction equivalence.			
4.NF.A.1	Explain why a fraction a/b is equivalent to a fraction $(n \times a)/(n \times b)$ by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions.	**Bridges in Mathematics** Unit 3: M1 S3; M1 S4; M1 S5; M1 S6; M2 S1; M2 S3 Unit 7: M1 S1; M1 S2	**Number Corner** October: Calendar Grid March: Number Strings
4.NF.A.2	Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as $\frac{1}{2}$. Recognize that 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.	**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	**Number Corner** October: Calendar Grid January: Computational Fluency February: Computational Fluency

Standard	Descriptor	Citations	
4.NF.B Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.			
	4.NF.B.3 Understand a fraction *a*/*b* with *a* > 1 as a sum of fractions 1/*b*.		
4.NF.B.3a	Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.	**Bridges in Mathematics** Unit 3: M1 S3; M2 S4; M2 S5; M2 S6; M3 S3	**Number Corner** September: Calendar Collector February: Number Strings March: Calendar Collector
4.NF.B.3b	Decompose a fraction into a sum of fractions with the same denominator in more than one way, recording each decomposition by an equation. Justify decompositions, e.g., by using a visual fraction model.	**Bridges in Mathematics** Unit 3: M1 S5; M2 S2; M2 S4	**Number Corner** November: Calendar Collector January: Calendar Collector February: Number Strings
4.NF.B.3c	Add and subtract mixed numbers with like 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** September: Calendar Collector November: Calendar Collector January: Calendar Collector February: Number Strings March: Calendar Collector
4.NF.B.3d	Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators, e.g., by using visual fraction models and equations to represent the problem.	**Bridges in Mathematics** Unit 3: M2 S5; M2 S6 Unit 6: M4 S2	

Standard	Descriptor	Citations	
4.NF.B Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.			
	4.NF.B.4 Apply and extend previous understandings of multiplication to multiply a fraction by a whole number.		
4.NF.B.4a	Understand a fraction *a*/*b* as a multiple of 1/*b*.	**Bridges in Mathematics** Unit 3: M2 S1; M2 S2; M2 S6	**Number Corner** December: Solving Problems January: Calendar Collector May: Number Strings
4.NF.B.4b	Understand a multiple of *a*/*b* as a multiple of 1/*b*, and use this understanding to multiply a fraction by a whole number.	**Bridges in Mathematics** Unit 3: M2 S6	**Number Corner** December: Solving Problems January: Calendar Collector February: Number Strings April: Computational Fluency May: Number Strings
4.NF.B.4c	Solve word problems involving multiplication of a fraction by a whole number, e.g., by using visual fraction models and equations to represent the problem.	**Bridges in Mathematics** Unit 3: M2 S6	**Number Corner** December: Solving Problems January: Calendar Collector February: Number Strings April: Computational Fluency May: Number Strings
4.NF.C Understand decimal notation for fractions and compare decimal fractions.			
4.NF.C.5	Express a fraction with denominator 10 as an equivalent fraction with denominator 100 and use this technique to add two fractions with respective denominators 10 and 100.	**Bridges in Mathematics** Unit 3: M3 S1; M3 S2; M3 S3; M4 S1 Unit 7: M2 S1; M2 S2; M2 S4	**Number Corner** October: Calendar Grid February: Computational Fluency, Number Strings March: Computational Fluency

Standard	Descriptor	Citations	
4.NF.C Understand decimal notation for fractions and compare decimal fractions.			
4.NF.C.6	Use decimal notation for fractions with denominators 10 or 100.	**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
4.NF.C.7	Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when the two decimals refer to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions, e.g., by using a visual model.	**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

Standard	Descriptor	Citations	
4.M.A Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.			
4.M.A.1	Know relative sizes of measurement units within one system of units including km, m, cm. mm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table.	**Bridges in Mathematics** Unit 1: M4 S1; M4 S2; M4 S3 Unit 2: M1 S3; M3 S4 Unit 4: M3 S1; M3 S2; M3 S3; M3 S4; M3 S5 Unit 8: M3 S2; M3 S5	**Number Corner** November: Calendar Collector April: Calendar Collector
4.M.A.2	Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.	**Bridges in Mathematics** Unit 1: M4 S1; M4 S3 Unit 4: M3 S1; M3 S3; M3 S4; M3 S5; M4 S1; M4 S2 Unit 5: M1 S6 Unit 6: M4 S1; M4 S2 Unit 8: M3 S2; M3 S5	**Number Corner** November: Calendar Collector April: Calendar Collector

Standard	Descriptor	Citations	
4.M.A Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.			
4.M.A.3	Apply the area and perimeter formulas for rectangles in real world and mathematical problems.	**Bridges in Mathematics** Unit 2: 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 8: M3 S2; M3 S5	
4.M.B Geometric measurement: understand concepts of angle and measure angles.			
	4.M.B.4 Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement:		
4.M.B.4a	An angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. An angle that turns through $\frac{1}{360}$ of a circle is called a "one-degree angle," and can be used to measure angles.	**Bridges in Mathematics** Unit 5: M1 S2; M1 S3; M1 S5	**Number Corner** February: Calendar Collector
4.M.B.4b	An angle that turns through *n* one-degree angles is said to have an angle measure of *n* degrees.	**Bridges in Mathematics** Unit 5: M1 S2; M1 S3; M4 S1; M4 S2	**Number Corner** February: Calendar Collector

Standard	Descriptor	Citations	
4.M.B Geometric measurement: understand concepts of angle and measure angles.			
4.M.B.5	Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.	**Bridges in Mathematics** Unit 5: M1 S4; M1 S5; M1 S6; M4 S1; M4 S2 Unit 8: M1 S4; M1 S5; M1 S6; M4 S1	**Number Corner** February: Calendar Collector
4.M.B.6	Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems, e.g., by using an equation with a symbol for the unknown angle measure.	**Bridges in Mathematics** Unit 5: M1 S3; M1 S4; M4 S2; M4 S3 Unit 8: M1 S6	**Number Corner** February: Calendar Grid

4 DL — Data Literacy

Standard	Descriptor	Citations	
4.DL.A Organize data and understand data visualizations.			
4.DL.A.1	Create data-based questions, generate ideas based on the questions, and then refine the questions.	**Bridges in Mathematics** Unit 6: M4 S1; M4 S2 Unit 8: M1 S5; M1 S6	
4.DL.A.2	Develop strategies to collect various types of data and organize data digitally.	**Bridges in Mathematics** Unit 8: M1 S4; M2 S2; M2 S3; M2 S4; M2 S5	
4.DL.A.3	Understand that subsets of data can be selected and analyzed for a particular purpose.	*This standard is beyond the scope of the program.*	
4.DL.A.4	Analyze visualizations of a single data set, share explanations and draw conclusions the data supports.	**Bridges in Mathematics** Unit 8: M1 S4; M1 S5; M1 S6; M2-S2; M2 S3; M2 S4; M2 S5	**Number Corner** September: Data Collector December: Data Collector February: Calendar Collector May: Calendar Collector
4.DL.B Represent and interpret measurement data.			
4.DL.B.5	Make a line plot to display a data set of measurements in fractions of a unit ($\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$). Solve problems involving addition and subtraction of fractions by using information presented in line plots.	**Bridges in Mathematics** Unit 4: M4 S2 Unit 6: M4 S1; M4 S2	**Number Corner** April: Solving Problems

4 G — Geometry

Standard	Descriptor	Citations	
4.G.A Draw and identify lines and angles, and classify shapes by properties of their lines and angles.			
4.G.A.1	Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. 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	**Number Corner** February: Calendar Grid
4.G.A.2	Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category and identify right triangles.	**Bridges in Mathematics** Unit 5: M1 S1; M2 S4; M2 S5; M2 S6	**Number Corner** February: Calendar Grid March: Solving Problems
4.G.A.3	Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry.	**Bridges in Mathematics** Unit 5: M2 S2; M2 S3; M2 S5	**Number Corner** March: Calendar Grid, Solving Problems April: Calendar Grid May: Calendar Grid