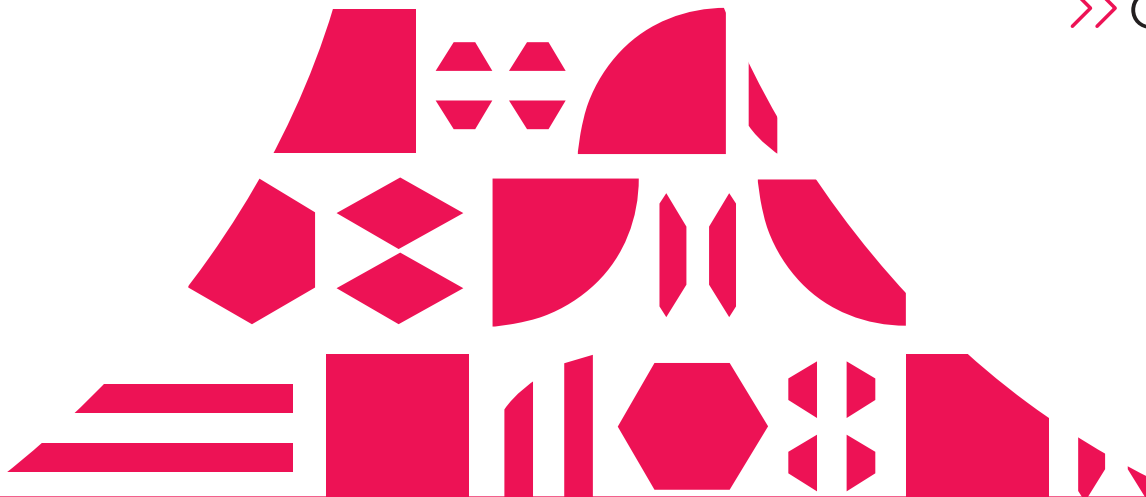


GRADE
5

Bridges & Number Corner Third Edition >>

CORRELATIONS

>> Ohio's Learning Standards
for Mathematics



5 MP — Standards for Mathematical Practice

Standard	Descriptor	Citations
Standards for Mathematical Practice		
MP1	Make sense of problems and persevere in solving them.	<p>Bridges in Mathematics</p> 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
MP2	Reason abstractly and quantitatively.	<p>Bridges in Mathematics</p> 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
MP3	Construct viable arguments and critique the reasoning of others.	<p>Bridges in Mathematics</p> 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

Standard	Descriptor	Citations
Standards for Mathematical Practice		
MP4	Model with mathematics.	<p>Bridges in Mathematics</p> 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
		<p>Number Corner</p> September: Solving Problems December: Calendar Collector March: Calendar Collector April: Calendar Collector, Solving Problems
MP5	Use appropriate tools strategically.	<p>Bridges in Mathematics</p> 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
		<p>Number Corner</p> 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
MP6	Attend to precision.	<p>Bridges in Mathematics</p> 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
		<p>Number Corner</p> 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
Standards for Mathematical Practice		
MP7	Look for and make use of structure.	<p>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</p> <p>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</p>
MP8	Look for and express regularity in repeated reasoning.	<p>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</p> <p>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</p>

5 OA — Operations and Algebraic Thinking

Standard	Descriptor	Citations
Write and interpret numerical expressions.		
5.OA.1	Use parentheses in numerical expressions and evaluate expressions with this symbol. Formal use of algebraic order of operations is not necessary.	<p>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</p> <p>Number Corner September: Calendar Collector October: Computational Fluency November: Computational Fluency</p>
5.OA.2	Write simple expressions that record calculations with numbers and interpret numerical expressions without evaluating them.	<p>Bridges in Mathematics Unit 1: M1 S4; M1 S5; M3 S3; M2 S1 Unit 8: M1 S1</p> <p>Number Corner September: Calendar Collector November: Computational Fluency May: Solving Problems</p>
Analyze patterns and relationships.		
5.OA.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.	<p>Bridges in Mathematics Unit 6: M1 S1; M1 S2; M1 S3; M1 S4; M1 S5; M1 S6; M1 S7</p> <p>Number Corner October: Solving Problems January: Calendar Grid</p>

5 NBT — Number and Operations in Base Ten

Standard	Descriptor	Citations
Understand the place value system.		
5.NBT.1	Recognize that in a multidigit number, a digit in one place represents 10 times as much as it represents in the place to its right and $\frac{1}{10}$ of what it represents in the place to its left.	<p>Bridges in Mathematics Unit 3: M1 S3; M1 S4; M1 S5; M2 S1</p> <p>Number Corner November: Calendar Collector February: Solving Problems March: Calendar Grid</p>
5.NBT.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.	<p>Bridges in Mathematics Unit 3: M1 S3; M1 S4; M3 S1 Unit 6: M1 S2 Unit 7: M3 S1; M3 S2; M3 S3</p> <p>Number Corner November: Calendar Collector February: Calendar Collector, Solving Problems</p>
5.NBT.3 Read, write, and compare decimals to thousandths.		
5.NBT.3a	Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g., $347.392 = 3 \times 100 + 4 \times 10 + 7 \times 1 + 3 \times (\frac{1}{10}) + 9 \times (\frac{1}{100}) + 2 \times (\frac{1}{1000})$.	<p>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</p>
5.NBT.3b	Compare two decimals to thousandths based on meanings of the digits in each place, using $>$, $=$, and $<$ symbols to record the results of comparisons.	<p>Bridges in Mathematics Unit 3: M1 S5; M2 S2</p> <p>Number Corner March: Computational Fluency</p>

Standard	Descriptor	Citations	
Understand the place value system.			
5.NBT.4	Use place value understanding to round decimals to any place, millions through hundredths.	Bridges in Mathematics Unit 3: M2 S3	
Perform operations with multidigit whole numbers and with decimals to hundredths.			
5.NBT.5	Fluently multiply multidigit whole numbers using a 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
5.NBT.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

Standard	Descriptor	Citations
Perform operations with multidigit whole numbers and with decimals to hundredths.		
5.NBT.7 Solve real-world problems by adding, subtracting, multiplying, and dividing decimals using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction, or multiplication and division; relate the strategy to a written method and explain the reasoning used.		
5.NBT.7a	Add and subtract decimals, including decimals with whole numbers, (whole numbers through the hundreds place and decimals through the hundredths place).	<p>Bridges in Mathematics Unit 2: M3 S1 Unit 3: M2 S1; M2 S2; M2 S3; M2 S4; M2 S7 Unit 6: M1 S2</p> <p>Number Corner September: Calendar Grid, Number Strings October: Solving Problems January: Calendar Collector</p>
5.NBT.7b	Multiply whole numbers by decimals (whole numbers through the hundreds place and decimals through the hundredths place).	<p>Bridges in Mathematics Unit 4: M1 S3; M2 S1; M2 S2; M2 S3; M2 S4 Unit 7: M3 S3; M3 S4; M4 S1</p> <p>Number Corner December: Solving Problems, Number Strings January: Number Strings February: Computational Fluency</p>
5.NBT.7c	Divide whole numbers by decimals and decimals by whole numbers (whole numbers through the tens place and decimals less than one through the hundredths place using numbers whose division can be readily modeled).	<p>Bridges in Mathematics Unit 7: M3 S3; M4 S2; M4 S3</p> <p>Number Corner March: Computational Fluency, Solving Problems April: Calendar Collector</p>

5 NF — Number and Operations: Fractions

Standard	Descriptor	Citations
Use equivalent fractions as a strategy to add and subtract fractions. (Fractions need not be simplified.)		
5.NF.1	Add and subtract fractions with unlike denominators (including mixed numbers and fractions greater than 1) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators.	<p>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</p> <p>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</p>
5.NF.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.	<p>Bridges in Mathematics Unit 2: M2 S2; M2 S3; M2 S4; M3 S3; M3 S4; M4 S3</p> <p>Number Corner December: Computational Fluency January: Calendar Collector March: Calendar Collector April: Solving Problems</p>

Standard	Descriptor	Citations
Apply and extend previous understandings of multiplication and division to multiply and divide fractions. (Fractions need not be simplified.)		
5.NF.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.	<p>Bridges in Mathematics Unit 1: M4 S3 Unit 2: M2 S5; M3 S1 Unit 7: M1 S2; M1 S3; M2 S5; M2 S6</p> <p>Number Corner March: Computational Fluency</p>
5.NF.4 Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction.		
5.NF.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 $a \times q \div b$.	<p>Bridges in Mathematics Unit 2: M2 S1; M2 S2; M2 S3; M3 S4 Unit 7: M3 S2 Unit 8: M2 S3; M2 S4; M2 S5; M3 S2; M3 S3; M3 S4; M3 S5</p>
5.NF.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.	<p>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</p> <p>Number Corner February: Calendar Grid April: Number Strings May: Number Strings</p>

Standard	Descriptor	Citations
Apply and extend previous understandings of multiplication and division to multiply and divide fractions. (Fractions need not be simplified.)		
5.NF.5 Interpret multiplication as scaling (resizing).		
5.NF.5a	Compare 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.5b	Explain 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.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: M3 S1; M3 S2 Unit 6: M4 S1; M4 S2; M4 S3 Unit 8: M1 S1; M3 S3; M3 S4; M3 S5 Number Corner April: Calendar Collector, Number Strings

Standard	Descriptor	Citations
Apply and extend previous understandings of multiplication and division to multiply and divide fractions. (Fractions need not be simplified.)		
5.NF.7 Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions. In general, students able to multiply fractions can develop strategies to divide fractions, by reasoning about the relationship between multiplication and division, but division of a fraction by a fraction is not a requirement at this grade.		
5.NF.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.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.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 MD — Measurement and Data

Standard	Descriptor	Citations
Convert like measurement units within a given measurement system.		
5.MD.1	<p>Know relative sizes of these U.S. customary measurement units: pounds, ounces, miles, yards, feet, inches, gallons, quarts, pints, cups, fluid ounces, hours, minutes, and seconds. Convert between pounds and ounces; miles and feet; yards, feet, and inches; gallons, quarts, pints, cups, and fluid ounces; hours, minutes, and seconds in solving multistep, real-world problems.</p>	<p>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</p> <p>Number Corner May: Calendar Collector</p>
Represent and interpret data.		
5.MD.2	<p>Display and interpret data in graphs (picture graphs, bar graphs, and line plots) to solve problems using numbers and operations for this grade, e.g., including U.S. customary units in fractions $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$, or decimals.</p>	<p>Bridges in Mathematics Unit 6: M4 S2; M4 S3 Unit 8: M1 S3</p> <p>Number Corner December: Calendar Collector March: Calendar Collector May: Calendar Collector</p>

Standard	Descriptor	Citations	
Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.			
5.MD.3 Recognize volume as an attribute of solid figures and understand concepts of volume measurement.			
5.MD.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.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.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
Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.		
5.MD.5 Relate volume to the operations of multiplication and addition and solve real-world and mathematical problems involving volume.		
5.MD.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.	<p>Bridges in Mathematics Unit 1: M1 S5; M2 S1; M2 S2 Unit 6: M3 S1; M3 S2</p> <p>Number Corner September: Calendar Collector January: Solving Problems April: Calendar Grid</p>
5.MD.5b	Apply the formulas $V = \ell \times w \times h$ 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.	<p>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</p>
5.MD.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.	<p>Bridges in Mathematics Unit 1: M1 S5; M2 S1; M2 S2 Unit 6: M3 S1</p> <p>Number Corner October: Calendar Grid</p>

5 G — Geometry

Standard	Descriptor	Citations
Graph points on the coordinate plane to solve real-world and mathematical problems.		
5.G.1	<p>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.</p>	<p>Bridges in Mathematics Unit 6: M1 S1; M1 S2; M1 S3</p> <p>Number Corner October: Calendar Collector November: Calendar Grid December: Calendar Collector May: Calendar Grid</p>
5.G.2	<p>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.</p>	<p>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</p>

Standard	Descriptor	Citations	
Classify two-dimensional figures into categories based on their properties.			
5.G.3	Identify and describe commonalities and differences between types of triangles based on angle measures (equiangular, right, acute, and obtuse triangles) and side lengths (isosceles, equilateral, and scalene triangles).	Bridges in Mathematics Unit 6: M2 S1; M2 S3; M2 S4; M3 S5	Number Corner December: Calendar Grid
5.G.4	Identify and describe commonalities and differences between types of quadrilaterals based on angle measures, side lengths, and the presence or absence of parallel and perpendicular lines, e.g., squares, rectangles, parallelograms, trapezoids, and rhombuses.	Bridges in Mathematics Unit 6: M2 S2; M2 S3; M2 S4; M3 S5	Number Corner November: Calendar Grid December: Calendar Grid