FLORIDA STANDARDS TO BOOK CORRELATION

After a standard is introduced, it is revisited many times in subsequent activities, lessons, and exercises.

Domain: Ratios and Proportional Relationships

Standards (MAFS)

6.RP.1.1 Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities.
- **Section 5.1** Ratios
- **Section 5.2** Ratio Tables
- **Section 5.3** Rates
- **Section 5.4** Comparing and Graphing Ratios

6.RP.1.2 Understand the concept of a unit rate a/b associated with a ratio $a : b$ with $b \neq 0$, and use rate language in the context of a ratio relationship.
- **Section 5.3** Rates
- **Section 5.4** Comparing and Graphing Ratios

6.RP.1.3 Use ratio and rate reasoning to solve real-world and mathematical problems.
- **a.** Make tables of equivalent ratios relating quantities with whole-number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios.
  - **Section 5.2** Ratio Tables
  - **Section 5.3** Rates
  - **Section 5.4** Comparing and Graphing Ratios
  - **Section 7.4** Writing Equations in Two Variables
- **b.** Solve unit rate problems including those involving unit pricing and constant speed.
  - **Section 5.3** Rates
  - **Section 5.4** Comparing and Graphing Ratios
- **c.** Find a percent of a quantity as a rate per 100; solve problems involving finding the whole, given a part and the percent.
  - **Section 5.5** Percents
  - **Section 5.6** Solving Percent Problems
- **d.** Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying or dividing quantities.
  - **Section 5.7** Converting Measures
- **e.** Understand the concept of pi as the ratio of the circumference of a circle to its diameter.
  - **Additional Activity** Exploring Ratios in Circles

Domain: The Number System

Standards (MAFS)

6.NS.1.1   Interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions.
- **Section 2.1**   Multiplying Fractions
- **Section 2.2**   Dividing Fractions
- **Section 2.3**   Dividing Mixed Numbers

6.NS.2.2   Fluently divide multi-digit numbers using the standard algorithm.
- **Section 1.1**   Whole Number Operations

6.NS.2.3   Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.
- **Section 2.4**   Adding and Subtracting Decimals
- **Section 2.5**   Multiplying Decimals
- **Section 2.6**   Dividing Decimals

6.NS.2.4   Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12. Use the distributive property to express a sum of two whole numbers 1–100 with a common factor as a multiple of a sum of two whole numbers with no common factor.
- **Section 1.4**   Prime Factorization
- **Section 1.5**   Greatest Common Factor
- **Section 1.6**   Least Common Multiple
- **Extension 1.6**   Adding and Subtraction Fractions
- **Section 3.4**   The Distributive Property
- **Extension 3.4**   Factoring Expressions

6.NS.3.5   Understand that positive and negative numbers are used together to describe quantities having opposite directions or values; use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation.
- **Section 6.1**   Integers
- **Section 6.3**   Fractions and Decimals on the Number Line

6.NS.3.6   Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates.
- **a.** Recognize opposite signs of numbers as indicating locations on opposite sides of 0 on the number line; recognize that the opposite of the opposite of a number is the number itself, and that 0 is its own opposite.
  - **Section 6.1**   Integers
  - **Section 6.3**   Fractions and Decimals on the Number Line

b. Understand signs of numbers in ordered pairs as indicating locations in quadrants of the coordinate plane; recognize that when two ordered pairs differ only by signs, the locations of the points are related by reflections across one or both axes.

c. Find and position integers and other rational numbers on a horizontal or vertical number line diagram; find and position pairs of integers and other rational on a coordinate plane.

6.NS.3.7   Understand ordering and absolute value of rational numbers.

a. Interpret statements of inequality as statements about the relative position of two numbers on a number line diagram.

b. Write, interpret, and explain statements of order for rational numbers in real-world contexts.

c. Understand the absolute value of a rational number as its distance from 0 on the number line; interpret absolute value as magnitude for a positive or negative quantity in a real-world situation.

d. Distinguish comparisons of absolute value from statements about order.

6.NS.3.8   Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane. Include use of coordinates and absolute value to find distance between points with the same first coordinate or the same second coordinate.

Domain: Expressions and Equations

Standards (MAFS)

6.EE.1.1   Write and evaluate numerical expressions involving whole-number exponents.
  - **Section 1.2**   Powers and Exponents
  - **Section 1.3**   Order of Operations

6.EE.1.2   Write, read, and evaluate expressions in which letters stand for numbers.
  - **a.** Write expressions that record operations with numbers and with letters standing for numbers.
    - **Section 3.2**   Writing Expressions
  - **b.** Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient); view one or more parts of an expression as a single entity.
    - **Section 1.5**   Greatest Common Factor
    - **Section 3.4**   The Distributive Property
    - **Extension 3.4**   Factoring Expressions
  - **c.** Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-world problems. Perform arithmetic operations, including those involving whole-number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations).
    - **Section 3.1**   Algebraic Expressions

6.EE.1.3   Apply the properties of operations to general equivalent expressions.
  - **Section 3.3**   Properties of Addition and Multiplication
  - **Section 3.4**   The Distributive Property
  - **Extension 3.4**   Factoring Expressions

6.EE.1.4   Identify when two expressions are equivalent.
  - **Section 3.3**   Properties of Addition and Multiplication
  - **Section 3.4**   The Distributive Property
  - **Extension 3.4**   Factoring Expressions

6.EE.2.5   Understand solving an equation or inequality as a process of answering a question: which values from a specified set, if any, make the equation or inequality true? Use substitution to determine whether a given number in a specified set makes an equation or inequality true.
  - **Section 7.2**   Solving Equations Using Addition or Subtraction
  - **Section 7.3**   Solving Equations Using Multiplication or Division
  - **Section 7.5**   Writing and Graphing Inequalities
  - **Section 7.6**   Solving Inequalities Using Addition or Subtraction
  - **Section 7.7**   Solving Inequalities Using Multiplication or Division

6.EE.2.6   Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set.

6.EE.2.7   Solve real-world and mathematical problems by writing and solving equations of the form $x + p = q$ and $px = q$ for cases in which p, q, and x are all nonnegative rational numbers.

6.EE.2.8   Write an inequality of the form $x > c$ or $x < c$ to represent a constraint or condition in a real-world or mathematical problem. Recognize that inequalities of the form $x > c$ or $x < c$ have infinitely many solutions; represent solutions of such inequalities on number line diagrams.

6.EE.3.9   Use variables to represent two quantities in a real-world problem that change in relationship to one another; write an equation to express one quantity thought of as the dependent variable, in terms of the other quantity, thought of as the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation.

Domain: Geometry

Standards (MAFS)

6.G.1.1   Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving real-world and mathematical problems.

6.G.1.2   Find the volume of a right rectangular prism with fractional edge lengths by packing it with unit cubes of the appropriate unit fraction edge lengths, and show that the volume is the same as would be found by multiplying the edge length of the prism. Apply the formulas $V = \ell wh$ and $V = bh$ to find volumes of right rectangular prisms with fractional edge lengths in the context of solving real-world and mathematical problems.

6.G.1.3   Draw polygons in the coordinate plane given coordinates for the vertices; use coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate. Apply these techniques in the context of solving real-world and mathematical problems.
- **Section 4.4**   Polygons in the Coordinate Plane

6.G.1.4   Represent three-dimensional figures using nets made up of rectangles and triangles, and use the nets to find the surface area of these figures. Apply these techniques in the context of solving real-world and mathematical problems.
- **Section 8.1**   Three-Dimensional Figures
- **Section 8.2**   Surface Areas of Prisms
- **Section 8.3**   Surface Areas of Pyramids

Domain: Statistics and Probability

Standards (MAFS)

6.SP.1.1   Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers.
- **Section 9.1**   Introduction to Statistics

6.SP.1.2   Understand that a set of data collected to answer a statistical question has a distribution which can be described by its center, spread, and overall shape.
- **Section 9.1**   Introduction to Statistics
- **Section 9.2**   Mean
- **Section 9.3**   Measures of Center
- **Section 9.4**   Measures of Variation
- **Section 9.5**   Mean Absolute Deviation
- **Section 10.2**   Histograms
- **Section 10.3**   Shapes of Distributions
- **Section 10.4**   Box-and-Whisker Plots

6.SP.1.3   Recognize that a measure of center for a numerical data set summarizes all of its values with a single number, while a measure of variation describes how its values vary with a single number.
- **Section 9.2**   Mean
- **Section 9.3**   Measures of Center
- **Section 9.4**   Measures of Variation
- **Section 9.5**   Mean Absolute Deviation

6.SP.2.4   Display numerical data in plots on a number line, including dot plots, histograms, and box plots.
- **Section 9.1**   Introduction to Statistics
- **Section 10.1**   Stem-and-Leaf Plots
- **Section 10.2**   Histograms
- **Section 10.3**   Shapes of Distributions
- **Section 10.4**   Box-and-Whisker Plots