

Brandon Valley School District

Mathematics

Scope and Sequence

Grade: 6

Quarter 1

Timeline (month/days)	Standard(s)
15 days	6.NS.B.2 Fluently divide multi-digit numbers using an algorithm including but not limited to the standard algorithm
	6.NS.B.3 Fluently add, subtract, multiply, and divide multi-digit decimals using an algorithm including but not limited to the standard algorithm for each operation.
14 days	6.NS.A.1 Interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions, e.g., by using visual fraction models and equations to represent the problem. For example, create a story context for $(2/3) \div (3/4)$ and use a visual fraction model to show the quotient; use the relationship between multiplication and division to explain that $(2/3) \div (3/4) = 8/9$ because $3/4$ of $8/9$ is $2/3$. (In general, $(a/b) \div (c/d) = ad/bc$.) How much chocolate will each person get if 3 people share $1/2$ lb of chocolate equally? How many $3/4$ -cup servings are in $2/3$ of a cup of yogurt? How wide is a rectangular strip of land with length $3/4$ mi and area $1/2$ square mi?
14 days	6.NS.B.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
	6.RP.A.1 Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities. For examples, "The ratio of wings to beaks in the bird house at the zoo was 2:1, because for every 2 wings there was 1 beak." "For every vote candidate A received, candidate C received nearly three votes."
	6.RP.A.2 Understand the concept of a unit rate a/b associated with a ratio $a:b$ with b not equal to 0, and use rate language in the context of a ratio relationship. For example, "This recipe has a ratio of 3 cups of flour to 4 cups of sugar, so there is $3/4$ cup of flour for each cup of sugar." "We paid \$75 for 15 hamburgers, which is a rate of \$5 per hamburger."
	6.RP.A.3a 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.
	6.RP.A.3b Solve unit rate problems including those involving unit pricing and constant speed. For example, if it took 7 hours to mow 4 lawns, then at that rate, how many lawns could be mowed in 35 hours? At what rate were lawns being mowed?
	6.RP.A.3d Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying or dividing quantities.

Quarter 2

Timeline (month/days)	Standard(s)
20 days	6.RP.A.3c Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means $30/100$ times the quantity); solve problems involving finding the whole, given a part and the percent.

16 days	6.NS.C.5 Understand that positive and negative numbers are used together to describe quantities having opposite directions or values (e.g., temperature above/below zero, elevation above/below sea level, credits/debits, positive/negative electric charge); use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation.
	6.NS.C.6a 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, e.g., $-(-3) = 3$, and that 0 is its own opposite.
	6.NS.C.6b 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.
	6.NS.C.6c 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 numbers on a coordinate plane.
	6.NS.C.7a Interpret statements of inequality as statements about the relative position of two numbers on a number line diagram.
	6.NS.C.7b Write, interpret, and explain statements of order for rational numbers in real-world contexts.
	6.NS.C.7c 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.
	6.NS.C.7d Distinguish comparisons of absolute value from statements about order.
9 days	6.NS.C.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 distances between points with the same first coordinate or the same second coordinate.
	6.EE.A.1 Write and evaluate numerical expressions involving whole-number exponents (e.g. parentheses, brackets, or braces).
	6.NS.B.3 Fluently add, subtract, multiply, and divide multi-digit decimals using an algorithm including but not limited to the standard algorithm for each operation.
	6.EE.A.2a Write expressions that record operations with numbers and with letters standing for numbers. For example, express the calculation "Subtract y from 5" as $5 - y$.
	6.EE.A.2c Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-world problems.
	6.EE.A.2d Perform arithmetic operations following the order of operations with and without parentheses, including those involving whole-number exponents.
	6.EE.B.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.

Quarter 3

Timeline (month/days)	Standard(s)
9 days	6.EE.A.2b 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. For example, describe the expression $2(8 + 7)$ as a product of two factors; view $(8 + 7)$ as both a single entity and a sum of two terms. 6.EE.A.3 Apply the properties of operations to generate equivalent expressions with an emphasis on the distributive property. 6.EE.A.4 Identify when two expressions are equivalent (i.e., when the two expressions name the same number regardless of which value is substituted into them).

10 days	<p>6.EE.B.5 Understand solving an equation or inequality is a process in which you determine values from a set that make an equation or inequality true. Use substitution to determine whether a given number in a specified set makes an equation or inequality true</p> <p>6.EE.B.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.</p>
13 days	<p>6.EE.A.2c Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-world problems.</p> <p>6.EE.B.5 Understand solving an equation or inequality is a process in which you determine values from a set that make an equation or inequality true. Use substitution to determine whether a given number in a specified set makes an equation or inequality true</p> <p>6.EE.B.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.</p> <p>6.EE.B.8 Write an inequality of the form $x > c$, $x < c$, $x > c$ or $x < c$ which represents a condition or constraint in a real world or mathematical problem. Recognize that inequalities have infinitely many solutions; represent solutions of inequalities on number line diagrams.</p> <p>6.EE.C.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.</p>
10 days	<p>6.G.A.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.</p> <p>6.G.A.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.</p> <p>6.NS.C.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 distances between points with the same first coordinate or the same second coordinate.</p>

Quarter 4

Timeline (month/days)	Standard(s)
14 days	<p>6.G.A.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 lengths of the prism. Apply the formulas $V = lwh$ and $V = Bh$ where B is the area of the base to find volumes of right rectangular prisms with fractional edge lengths in the context of solving real world and mathematical problems.</p> <p>6.G.A.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.</p>
15 days	<p>6.SP.A.1 Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers.</p> <p>6.SP.A.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.</p> <p>6.SP.A.3 Recognize that a measure of center (mean and/or median) for a numerical data set summarizes all of its values with a single number, while a measure of variation (such as</p>

	<p>mean absolute deviation and/or range) summarizes data points' distances from the mean or each other.</p> <p>6.SP.B.4 Display numerical data in plots on a number line, including dot plots, histograms, and box plots.</p> <p>6.SP.B.5a Reporting the number of observations.</p> <p>6.SP.B.5b Describing the nature of the attribute under investigation, including how it was measured and its units of measurement.</p> <p>6.SP.B.5c Giving quantitative measures of center (median and/or mean) and variability (interquartile range and/or mean absolute deviation), as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered.</p> <p>6.SP.B.5d Relating the choice of measures of center and variability to the shape of the data distribution and the context in which the data were gathered.</p>
15 days	<p>6.G.A.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.</p> <p>6.RP.A.1 Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities. For examples, "The ratio of wings to beaks in the bird house at the zoo was 2:1, because for every 2 wings there was 1 beak." "For every vote candidate A received, candidate C received nearly three votes."</p> <p>6.NS.B.3 Fluently add, subtract, multiply, and divide multi-digit decimals using an algorithm including but not limited to the standard algorithm for each operation.</p>

*Pink-priority, Yellow-supporting, Green-supplementary.

*60 minute class periods.

Notes Q1 (common curriculum materials - vendor/pg number, common assessments, common intervention/enrichment activities, other)

- Chapter 3 - Compute with Multi-Digit Numbers (McGraw-Hill) pages 173-252
 - p. 251 (McGraw-Hill) Performance Task
 - Road-Trip Performance Task (teacher created on Google Classroom)
 - Chapter 3 (teacher created) Assessment
 - ALEKS Initial Assessment (baseline data for each student, also provides students with individualized path)
 - STAR Test (Renaissance)
 - Number Sense Interim (SBAC)
 - ALEKS assignments (teacher created)
- Chapter 4 - Multiply and Divide Fractions (McGraw-Hill) pages 253-338
 - Chapter 4 (teacher created) Assessment
 - Division of Fractions Interim (SBAC)
 - Story Problem Sort (teacher created on Google Classroom)
 - ALEKS assignments (teacher created)
- Chapter 1 - Ratios and Rates (McGraw-Hill) pages 3-84
 - Chapter 1 (teacher created) Assessment
 - Double Number Line/Bar Diagram (teacher created PDF)
 - Lemonade Stand Performance Task (teacher created PDF)
 - ALEKS assignments (teacher created)

Notes Q2

- Chapter 2- Fractions, Decimals and Percents (McGraw-Hill) pages 85-168
 - Mid-Chapter 2 Quiz (teacher created)
 - Post-Chapter 2 Quiz (teacher created)

- Black Friday Shopping Project (teacher created)
- Ratios and Proportional Reasoning Interim Test (SBAC)
- ALEKS assignments (teacher created)
- Chapter 5 - Integers and the Coordinate Plane (McGraw-Hill) pages 341-420
 - Mid-Chapter 5 Quiz (teacher created)
 - Chapter 5 (teacher created) Assessment
 - ALEKS assignments (teacher created)
 - STAR Math Test (Renaissance)
- Chapter 6- Expressions (McGraw-Hill) pages 426 - 472
 - STAR Math Test (Renaissance)
 - ALEKS assignments (teacher created)

Notes Q3

- Chapter 6 Expressions (McGraw Hill) pages 473 - 508
 - Chapter 6 Test (teacher created)
 - ALEKS assignments (teacher created)
 - Manipulatives - Area Model/Algebra Tiles (teacher created)
- Chapter 7 (McGraw Hill) Equations pages 510 - 574
 - Chapter 7 Test (teacher created)
 - ALEKS assignments (teacher created)
- Chapter 8 (McGraw Hill) Functions and Inequalities pages 575 - 648
 - Mid-Chapter 8 Quiz (teacher created)
 - Post-Chapter 8 (teacher created) Assessment
 - Expressions and Equations Interim Test
 - ALEKS assignments (teacher created)
- Chapter 9 (McGraw Hill) Area pages 653-730
 - Chapter 9 (teacher created) Assessment
 - Formula Sheet (teacher created)

Notes Q4

- Chapter 10 (McGraw Hill) Volume and Surface Area pages 732 -796
 - Chapter 10 (teacher created) Assessment
 - Cereal Box PT (teacher created)
 - Manipulatives - Magnet Tiles/Figures/Nets) (teacher created)
- Chapter 11 and Chapter 12 (McGraw Hill) Statistical Measures and Displays pages 802 - 924
 - End of Unit Project (teacher created)
 - ALEKS assignments (teacher created)
- Enrichment Activities (Dream House) (teacher created)