

7th Grade Level Map

7th Grade Level Map

7.NS.1.d

7.NS.2 Extend prior knowledge of operations with positive rational numbers to multiply and to divide all rational numbers.

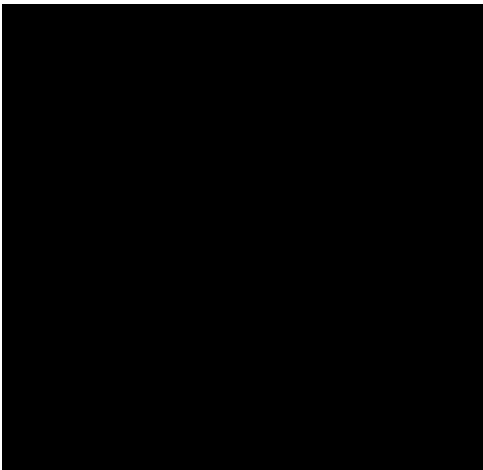
a. Understand that the multiplicative inverse of a number is its reciprocal and

7th Grade Level Map

	<p>7.EE.4 Apply the concepts of linear equations and inequalities in one variable to real-world and mathematical situations.</p> <p>a. Write and fluently solve linear equations of the form $ax + b = c$ and $a(x + b) = c$ where a, b, and c are rational numbers.</p> <p>b. Write and solve multi-step linear equations that include the use of the distributive property and combining like terms. Exclude equations that contain variables on both sides.</p> <p>c. Write and solve two-step linear inequalities. Graph the solution set on a number line and interpret its meaning.</p> <p>d. Identify and justify the steps for solving multi-step linear equations and two-step linear inequalities.</p> <p>7.EE.3 7.EE.4.a, b</p> <p>7.EE.5 Understand and apply the laws of exponents (i.e., product rule, quotient rule, power to a power, product to a power, quotient to a power, zero power property) to simplify numerical expressions that include whole-number exponents.</p>	
--	---	--

**Unit 3:
Geometry A**

- 7.GM.2 Construct triangles and special quadrilaterals using a variety of tools (e.g., freehand, ruler and protractor, technology).
- a. Construct triangles given all measurements of either angles or sides.
- b. Decide if the measurements determine a unique triangle, more than one triangle, or no triangle.
- c. Construct special quadrilaterals (i.e., kite, trapezoid, isosceles trapezoid, rhombus, parallelogram, rectangle) given specific parameters about angles or sides.
- 7.GM.5 Write equations to solve problems involving the relationships between angles formed by two intersecting lines, including supplementary,



7th Grade Level Map

	complementary, vertical, and adjacent.	
<p>Unit 4: Geometry B</p>	<p>7.GM.1 Determine the scale factor and translate between scale models and actual measurements (e.g., lengths, area) of real-world objects and geometric figures using proportional reasoning.</p> <p>7.GM.4 Investigate the concept of circles.</p> <p>a. Demonstrate an understanding of the proportional relationships between diameter, radius, and circumference of a circle.</p> <p>b. Understand that the constant of proportionality between the circumference and diameter is equivalent to π.</p> <p>c. Explore the relationship between circumference and area using a visual model.</p> <p>d. Use the formulas for circumference and area of circles appropriately to solve real-world and mathematical problems.</p> <p>7.GM.3 Describe two-dimensional cross-sections of three-dimensional figures, specifically right rectangular prisms and right rectangular pyramids.</p> <p>7.GM.6 Apply the concepts of two- and three-dimensional figures to real-world and mathematical situations.</p> <p>a. Understand that the concept of area is applied to two-dimensional figures such as triangles, quadrilaterals, and polygons.</p> <p>b. Understand that the concepts of volume and surface area are applied to three-dimensional figures such as cubes, right rectangular prisms, and right triangular prisms.</p> <p>c. Decompose cubes, right rectangular prisms, and right triangular prisms into rectangles and triangles to derive the formulas for volume and surface area.</p>	<p>Chapters 11, 12, 13</p>

7th Grade Level Map

	<p>d. Use the formulas for area, volume, and surface area appropriately.</p>	
<p>Unit 5: Ratios and Proportional Relationships</p>	<p>7.RP.1 Compute unit rates, including those involving complex fractions, with like or different units.</p> <p>7.RP.2 Identify and model proportional relationships given multiple representations, including tables, graphs, equations, diagrams, verbal descriptions, and real-world situations.</p> <p>b. Recognize or compute the constant of proportionality.</p> <p>c. Understand that the constant of proportionality is the unit rate.</p> <p>7.RP.3 Solve real-world and mathematical problems involving ratios and percentages using proportional reasoning (e.g., multi-step dimensional analysis, percent increase/decrease, tax).</p> <p>7.RP.1 7.RP.2.a, b, c, d 7.RP.3</p> <p>7.RP.1 Compute unit rates, including those involving complex fractions, with like or different units.</p> <p>7.RP.2 Identify and model proportional relationships given multiple representations, including tables, graphs, equations, diagrams, verbal descriptions, and real-world situations.</p> <p>a. Determine when two quantities are in a proportional relationship.</p> <p>b. Recognize or compute the constant of proportionality.</p> <p>c. Understand that the constant of proportionality is the unit rate.</p> <p>d. Use equations to model proportional relationships.</p> <p>e. Investigate the graph of a proportional relationship and explain the meaning of specific points (e.g., origin, unit rate) in the context of the situation.</p>	<p>Chapters 1, 2, 3</p>

7th Grade Level Map

	<p>7.RP.3 Solve real-world and mathematical problems involving ratios and percentages using proportional reasoning (e.g., multi-step dimensional analysis, percent increase/decrease, tax).</p> <p>7.RP.1 7.RP.2.a, b, c 7.RP.3</p>	
<p>Unit 6: Statistics</p>	<p>7.DSP.1 Investigate concepts of random sampling.</p> <p>a. Understand that a sample is a subset of a population and both possess the same characteristics.</p> <p>b. Differentiate between random and non-random sampling.</p> <p>c. Understand that generalizations from a sample are valid only if the sample is representative of the population.</p> <p>d. Understand that random sampling is used to gather a representative sample and supports valid inferences about the population.</p> <p>7.DSP.2 Draw inferences about a population by collecting multiple random samples of the same size to investigate variability in estimates of the characteristic of interest.</p> <p>7.DSP.4 Compare the numerical measures of center (mean, median, mode) and variability (range, interquartile range, mean absolute deviation) from two</p>	

7th Grade Level Map

events.

a.