

Grade 7

Ratios and Proportional Relationships

- A Analyze proportional relationships and use them to solve problems.** 7.RP.A
- 2a Determine when two quantities are in a proportional relationship. 7.RP.A.2A
 - 2c Explain what a point (x, y) on the graph of a proportional relationship means in terms of the situation. 7.RP.A.2C
 - 3 Solve problems involving ratios, rates, percentages and proportional relationships. 7.RP.A.3
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Number Sense and Operations

- A Apply and extend previous understandings of operations to add, subtract, multiply and divide rational numbers.** 7.NS.A
- 1c Describe situations and show that a number and its opposite have a sum of 0 (additive inverses). 7.NS.A.1C
 - 1f Interpret sums and differences of rational numbers. 7.NS.A.1F
 - 2b Determine that a number and its reciprocal have a product of 1 (multiplicative inverse). 7.NS.A.2B
 - 2f Interpret products and quotients of rational numbers by describing real-world contexts. 7.NS.A.2F
 - 3 Solve problems involving the four arithmetic operations with rational numbers. 7.NS.A.3
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Expressions, Equations and Inequalities

- A Use properties of operations to generate equivalent expressions.** 7.EE1.A
- 1 Apply properties of operations to simplify and to factor linear algebraic expressions with rational coefficients. 7.EE1.A.1
 - 2 Understand how to use equivalent expressions to clarify quantities in a problem. 7.EE1.A.2
- B Solve problems using numerical and algebraic expressions and equations.** 7.EE1.B
- 3b Assess the reasonableness of answers using mental computation and estimation strategies. 7.EE1.B.3B
 - 4b Write and/or solve two-step equations of the form $px + q = r$ and $p(x + q) = r$, where p , q and r are rational numbers, and interpret the meaning of the solution in the context of the problem. 7.EE1.B.4B
 - 4c Write, solve and/or graph inequalities of the form $px + q > r$ or $px + q < r$, where p , q and r are rational numbers. 7.EE1.B.4C
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Geometry and Measurement

A Draw and describe geometric figures and describe the relationships between them. 7.GM.A

- 1 Solve problems involving scale drawings of real objects and geometric figures, including computing actual lengths and areas from a scale drawing and reproducing the drawing at a different scale. 7.GM.A.1
 - 4a Analyze the relationships among the circumference, the radius, the diameter, the area and Pi in a circle. 7.GM.A.4A
 - 4b Know and apply the formulas for circumference and area of circles to solve problems. 7.GM.A.4B
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B Apply and extend previous understanding of angle measure, area and volume. 7.GM.B

- 6a Find the area of triangles, quadrilaterals and other polygons composed of triangles and rectangles. 7.GM.B.6A
 - 6b Find the volume and surface area of prisms, pyramids and cylinders. 7.GM.B.6B
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Data, Statistics and Probability

A Use random sampling to draw inferences about a population. 7.DSP.A

- 1b Understand that generalizations from a sample are valid only if the sample is representative of the population. 7.DSP.A.1B
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B Draw informal comparative inferences about two populations. 7.DSP.B

- 3 Analyze different data distributions using statistical measures. 7.DSP.B.3
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C Develop, use and evaluate probability models. 7.DSP.C

- 5a Determine probabilities of simple events 7.DSP.C.5A
- 5b Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. 7.DSP.C.5B