



Topics Covered

Ratios and Proportional Relationships

Ratio relationships, unit rate associated with ratio, rate language, ratio and rate reasoning, tables of equivalent ratios, tape diagrams, double number line diagrams

Number System

Interpret and compute quotients of fractions, division of fractions by fractions, common factors and multiples, operations with multi-digit numbers and multi-digit decimals using the standard algorithm, apply and extend understandings of numbers to the system of rational numbers, describe quantities having opposite directions, rational numbers as negative and positive number coordinates, understand/interpret/explain rational numbers and absolute value of rational numbers

Expressions and Equations

Apply and extend understandings of arithmetic to algebraic expressions, read/write/identify/evaluate expressions and equivalent expressions, whole number exponents, apply properties of operations, understanding solving equations/inequalities as a process of answering a real-world question, evaluate inequalities as they represent a constraint or condition in a real-world context, analyze quantitative relationships between dependent and independent variables

Geometry

Area, surface area, volume, triangles, special quadrilaterals, polygons, composing and decomposing figures, area and volume of figures with fractional edge lengths, polygons in the coordinate plane, nets

Statistics and Probability

Recognize a statistical question, anticipate variability, understand the distribution of a data set, describe center/spread/overall shape of data distributions, display numerical data, summarize numerical data sets in relation to their context

Students have mastered Math 6 when they can:

- Explain and apply the mathematical topics and procedures of Math 6 with precision and fluency as they relate to real world contexts
- Gather information and persevere to solve complex and difficult problems
- Provide evidence for or against a given solution
- Construct and use mathematical models to show solutions to complex real-world problems



Sample Problem

<u>Grade 6 Math (before)</u>	<u>Math 6 (now)</u>
<p><u>Problem 1:</u></p> <p>Find an equivalent ratio to $\frac{2}{5}$</p> <p><u>Problem 2:</u></p> $\frac{3}{4} \div 5$ $\frac{4}{3} \times 12$	<p><u>Problem 1:</u></p> <p>For every \$2 that Sam saves, his brother saves five dollars. Create another ratio that describes the relationship between Sam's account and his brother's. Explain how you know your answer is correct.</p> <p><u>Problem 2:</u></p> <p>A group of 5 friends are sharing three-quarters of a pizza. (A) What equal sized portion of the pizza will each person receive? (B) If the three-quarters of a pizza provided 12 slices, how many pieces were in the pizza originally?</p>

Resources

Practice Test (Smarter Balanced Assessment)
<http://www.cde.ca.gov/ta/tg/sa/practicetest.asp>

Sample Test Items (Smarter Balanced Assessment)
<http://www.smarterbalanced.org/sample-items-and-performance-tasks/>

Practice Problems
<http://www.ixl.com/standards/california/math/grade-6>

Practice Problems and Instruction
<http://www.illustrativemathematics.org/6>

Orange County Department of Education Resources
<http://www.ocde.us/commoncoreca>