
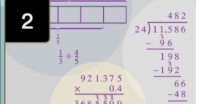






Module Overviews

					
Ratios, Rates, and Percents	Operations with Fractions and Multi-Digit Numbers	Rational Numbers	Expressions and One-Step Equations	Area, Surface Area, and Volume	Statistics

Module 1: [Ratios, Rates, and Percents](#)

In module 1, students are introduced to ratio reasoning. They use tape diagrams, double number lines, tables, and graphs to model and compare ratio relationships, determine equivalent ratios, and solve real-world problems. Then, students develop an understanding of rates associated with ratio relationships. They calculate unit rates and use them to solve problems involving speed, unit pricing, measurement conversions, and other real-world applications. At the end of the module, students understand a percent as a fraction with a denominator of 100, and they apply their ratio and rate reasoning to solve for the unknown percent, part, or whole in real-world problems.

Module 2: [Operations with Fractions and Multi-Digit Numbers](#)

Students begin module 2 by using visual models and an understanding of divisibility to find the greatest common factor and least common multiple of pairs of numbers. Then, students apply their previous understanding of multiplication and division to divide fractions by fractions. They model fraction division expressions with tape diagrams and double number lines, use common denominators to divide fractions by fractions, and then develop and apply the invert and multiply strategy. Students use standard algorithms to fluently add, subtract, and multiply decimals, and apply those skills in real-world applications. They extend their understanding of division from prior grades to use the standard division algorithm to divide multi-digit numbers and decimals.

Module 3: [Rational Numbers](#)

In module 3, students develop an understanding of rational numbers and use rational numbers to describe real-world quantities. Students plot rational numbers and their opposites on a number line, calculate absolute values, order and compare rational numbers, and apply the concept of magnitude to describe and compare real-world quantities. Students explore the structure of the four quadrants of the coordinate plane. They plot and locate points with rational number coordinates, reflect points across one or both axes, calculate the lengths of line segments, graph geometric figures, and use the coordinate plane to solve problems.

Module 4: [Expressions and One Step Equations](#)

In module 4, students work with numerical and algebraic expressions and equations. First, they learn that exponents represent repeated multiplication, evaluate powers with whole number, fraction, and decimal bases, and use the order of operations to evaluate numerical expressions. Then, students learn why and how to use variables to represent unknown numbers and quantities. They write and evaluate algebraic expressions and use properties of operations to generate equivalent expressions. Students reason about and solve single-variable, one-step equations, and they understand the meaning of a solution to an equation or inequality. At the end of the module, they revisit ratio relationships and write and graph equations in two variables, identifying independent and dependent variables in real-world situations.

Module 5: [Area, Surface Area, and Volume](#)

In module 5, students use their understanding of the areas of rectangles to develop formulas for the area of a parallelogram and the area of a triangle. Students apply their prior knowledge of area, equivalent numerical expressions, the properties of operations, and coordinate graphing as they find the areas of composite polygons and trapezoids. They identify attributes of the faces of right prisms and pyramids and use the net of a solid to determine its surface area. By packing right rectangular prisms with cubes of fractional edge lengths, students determine that the formulas $V=lwh$ and $V=Bh$ can be applied to find the volume of any right rectangular prism with positive, rational number edge lengths. Students apply these formulas to solve real-world and mathematical problems, and they write and solve single-variable equations to determine unknown measurements of a prism.

Module 6: [Statistics](#)

In module 6, students begin to think and reason statistically. They identify statistical questions and represent data distributions by using dot plots, histograms, relative frequency histograms, and box plots. Students describe the center, spread, and shape of a data distribution. They calculate and interpret measures of center and spread including mean, mean absolute deviation, median, and interquartile range, and they use these measures to describe the typical value and variability of a data distribution. At the end of the module, students complete a project where they develop a statistical question, implement a plan to collect data, analyze and interpret the data they collect, and present their findings to their peers.