

Quarter 1

The Number System & Expressions and Equations

CC.2.1.8. E.1: Distinguish between rational and irrational numbers using their properties.

- Convert between decimals and fractions or mixed numbers
- Identify rational and irrational square roots
- Identify rational and irrational numbers

CC.2.1.8.E.4: Estimate irrational numbers by comparing them to rational numbers.

- Estimate positive and negative square roots
- Estimate cube roots
- Irrational numbers on number lines

CC.2.2.8.B.1: Apply concepts of radicals and integer exponents to generate equivalent expressions.

- Exponents
- Square roots
- Cube roots
- Scientific notation

CC.2.2.8.B.2: Understand the connections between proportional relationships, lines and linear equations.

- Proportional relationships
- Slope of a linear equation
- Slope-intercept form
- Multiple representations of linear equations

Quarter 2

Functions

CC.2.2.8.B.3: Analyze and solve linear equations and pairs of simultaneous linear equations.

- Use models to solve equations
- Solve linear equations
- Solutions to linear equations
- Solutions to systems of equations
- Classify systems of equations
- Solve systems of equations

CC.2.2.8.C.1: Define, evaluate, and compare functions.

- Identify functions
- Function rules
- Function graphs
- Interpret graphs
- Domain and range
- Linear and nonlinear functions
- Compare linear functions

CC.2.2.8.C.2: Use concepts of functions to model relationships between quantities.

- Proportional relationships
- Linear relationships
- Nonlinear relationships

Quarter 3

Geometry

CC.2.3.8.A.1: Apply the concepts of volume of cylinders, cones and spheres to solve real-world and mathematical problems.

- Volume of cylinders
- Volume of cones
- Volume of spheres

CC.2.3.8.A.2: Understand and apply congruence, similarity, and geometric transformations using various tools.

- Identify transformations
- Translations
- Reflections
- Rotations
- Dilations
- Congruence
- Similar figures

CC.2.3.8.A.3: Understand and apply the Pythagorean Theorem to solve problems.

- Distance between two points
- Pythagorean theorem
- Converse of the Pythagorean theorem

Quarter 4

Statistics and Probability

CC.2.4.8.B.1: Analyze and/or interpret bivariate data displayed in multiple representations.

- Create scatter plots
- Identify trends with scatter plots
- Outliers in scatter plots
- Identify lines of best fit
- Write equations for lines of best fit

CC.2.4.8.B.2: Understand that patterns of association can be seen in bivariate data utilizing frequencies.

- Find probabilities using two-way frequency tables