

# 8<sup>th</sup> Grade Math Guide

## First Nine Weeks

### Mathematical Processes

- 0806.1.1** Solve problems involving rate/time/distance (i.e.,  $d=rt$ ).
- 0806.1.3** Calculate rates involving cost per unit to determine the best buy.

### Number and Operations

- 0806.2.1** Order and compare rational and irrational numbers and locate on the number line.
- 0806.2.2** Identify numbers and square roots as rational or irrational.
- 0806.2.3** Use scientific notation to compute products and quotients.
- 0806.2.4** Solve real-world problems requiring scientific notation.

*CC – Work with radicals and integer exponents.*

### Geometry and Measurement

- 0806.4.4** Convert between and within the U.S. Customary System and the metric system.
- 0806.4.5** Identify the intersection of two or more geometric figures in the plane.

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## Second Nine Weeks

### Algebra

- 0806.3.4** Translate between various representations of a linear function.
- 0806.3.5** Determine the slope of a line from an equation, two given points, a table or a graph.
- 0806.3.6** Analyze the graph of a linear function to find solutions and intercepts.
- 0806.3.7** Identify, compare and contrast functions as linear or nonlinear.

*CC – Understand the connections between proportional relationships, lines, and linear equations.*

*CC – Define, evaluate, and compare functions.*

*CC – Use functions to model relationships between quantities.*

### Geometry and Measurement

- 0806.4.1** Use the Pythagorean Theorem to solve contextual problems.
- 0806.4.2** Apply the Pythagorean Theorem to find distances between points in the coordinate plane to measure lengths and analyze polygons and polyhedra.
- 0806.4.3** Find measures of the angles formed by parallel lines cut by a transversal.

*CC – Understand congruence and similarity using physical models, transparencies, or geometry software.*

*CC – Understand and apply the Pythagorean Theorem*

*CC – Solve real-world and mathematical problems involving volume of cylinders, cones, and spheres.*

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## Third Nine Weeks

### Mathematical Processes

**0806.1.2** Interpret a qualitative graph representing a contextual situation.

### Algebra

**0806.3.1** Find solutions to systems of two linear equations in two variables.

**0806.3.2** Solve the linear equation  $f(x) = g(x)$

**0806.3.3** Solve and graph linear inequalities in two variables.

*CC – Analyze and solve linear equations and pairs of simultaneous linear equations.*

### Data Analysis, Statistics, and Probability

**0806.5.1** Calculate probabilities of events for simple experiments with equally probable outcomes.

**0806.5.2** Use a variety of methods to compute probabilities for compound events. (e.g., multiplication, organized lists, tree diagrams, area models)

**0806.5.3** Generalize the relationship between two sets of data using scatterplots and lines of best fit.

**0806.5.4** Recognize misrepresentations of published data in the media.

*CC – Investigate patterns of association in bivariate data.*