GRADE 8

CRITICAL AREAS OF FOCUS

1. Formulating and reasoning about expressions and equations, including modeling an association in bivariate data with a linear equation, and solving linear equations and systems of linear equations
2. Grasping the concept of a function and using functions to describe quantitative relationships
3. Analyzing two-and three-dimensional space and figures using distance, angle, similarity, and congruence, and understanding and applying the Pythagorean Theorem
4. Working with irrational numbers, integer exponents, and scientific notation

OVERVIEW

The Number System

- Know that there are numbers that are not rational, and approximate them by rational numbers.

Expressions and Equations

- Work with
- Understand the connections between proportional relationships, lines, and linear equations.
- Analyze and solve linear equations and pairs of simultaneous linear equations.

Functions

- Define, evaluate, and compare functions.
- Use functions to model relationships between quantities

Geometry

- Understand congruence and similarity using physical models, transparencies, or geometry software.
- Understand and apply the Pythagorean Theorem.
- Solve real-world and mathematical problems involving volume of cylinders, cones, and spheres.

Statistics and Probability

- Investigate patterns of association in bivariate data.

$$\frac{\sqrt{8}}{2} \rightarrow \frac{\sqrt{2*4}}{2} \rightarrow \frac{2\sqrt{2}}{2} \rightarrow \sqrt{2}$$