

Grade 8

Major	Supporting	Additional
<p>Expressions and Equations</p> <ul style="list-style-type: none"> ■ Work with radicals and integer exponents. ■ Understand the connections between proportional relationships, lines, and linear equations. ■ Analyze and solve linear equations and pairs of simultaneous linear equations. <p>Functions</p> <ul style="list-style-type: none"> ■ Define, evaluate, and compare functions. <p>Geometry</p> <ul style="list-style-type: none"> ■ Understand and apply the Pythagorean Theorem. ■ Understand congruence and similarity using physical models, transparencies, or geometry software. 	<p>The Number System</p> <ul style="list-style-type: none"> □ Know that there are numbers that are not rational, and approximate them by rational numbers. ¹⁰ <p>Functions</p> <ul style="list-style-type: none"> □ Use functions to model relationships between quantities. ¹¹ <p>Statistics and Probability</p> <ul style="list-style-type: none"> □ Investigate patterns of association in bivariate data. ¹² 	<p>Geometry</p> <ul style="list-style-type: none"> ○ Solve real-world and mathematical problems involving volume of cylinders, cones, and spheres.

Depth Opportunities:

EE 5, 7, 8; F 2; G 7

¹⁰ Work with the number system in this grade is intimately related to work with radicals, and both of these may be connected to the Pythagorean Theorem as well as to volume problems, e.g., in which a cube has known volume but unknown edge lengths.

¹¹ The work in this cluster involves functions for modeling linear relationships and a rate of change/initial value, which supports work with proportional relationships and setting up linear equations.

¹² Looking for patterns in scatterplots and using linear models to describe data are directly connected to the work in the Expressions and Equations clusters. Together, these represent a connection to the Standard for Mathematical Practice Model with mathematics.