8th Grade Math Essential Standards

updated 6-14-19

[CCSS.Math.Content.8.EE.A.2](http://www.corestandards.org/Math/Content/8/EE/A/2/) Use square root and cube root symbols to represent solutions to equations of the form *x*2 = *p* and *x*3 = p, where *p* is a positive rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes. Know that √2 is irrational.

CCSS.Math.Content.8.EE.A.1

Know and apply the properties of integer exponents to generate equivalent numerical expressions. For example, 32 × 3-5 = 3-3 = 1/33 = 1/27.

[CCSS.Math.Content.8.EE.C.7.a](http://www.corestandards.org/Math/Content/8/EE/C/7/a/)
Give examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions. Show which of these possibilities is the case by successively transforming the given equation into simpler forms, until an equivalent equation of the form *x* = *a*, *a* = *a*, or *a* = *b* results (where *a* and *b* are different numbers).

[CCSS.Math.Content.8.EE.C.7.b](http://www.corestandards.org/Math/Content/8/EE/C/7/b/) Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms.

[CCSS.MATH.CONTENT.8.F.A.1](http://www.corestandards.org/Math/Content/8/F/A/1/)Understand that a function is a rule that assigns to each input exactly one output. The graph of a function is the set of ordered pairs consisting of an input and the corresponding output.1

[CCSS.MATH.CONTENT.8.F.B.4](http://www.corestandards.org/Math/Content/8/F/B/4/) Construct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a description of a relationship or from two (*x, y*) values, including reading these from a table or from a graph. Interpret the rate of change and initial value of a linear function in terms of the situation it models, and in terms of its graph or a table of values.

[CCSS.MATH.CONTENT.8.G.B.7](http://www.corestandards.org/Math/Content/8/G/B/7/) Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions.