

EE Expressions and Equations

- **8.EE.A Work with radicals and integer exponents.**
 - **8.EE.A.1 Know and apply the properties of integer exponents to generate equivalent numerical expressions.**
 - [Exponents with negative bases \(8-F.4\)](#)
 - [Understanding negative exponents \(8-F.6\)](#)
 - [Evaluate negative exponents \(8-F.7\)](#)
 - [Multiplication with exponents \(8-F.8\)](#)
 - [Division with exponents \(8-F.9\)](#)
 - [Multiplication and division with exponents \(8-F.10\)](#)
 - [Power rule \(8-F.11\)](#)
 - [Evaluate expressions using properties of exponents \(8-F.12\)](#)
 - [Identify equivalent expressions involving exponents I \(8-F.13\)](#)
 - [Identify equivalent expressions involving exponents II \(8-F.14\)](#)
 - **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 $\sqrt{2}$ is irrational.**
 - [Identify rational and irrational square roots \(8-D.\)](#)
 - [Square roots of perfect squares \(8-F.15\)](#)
 - [Positive and negative square roots \(8-F.17\)](#)
 - [Relationship between squares and square roots \(8-F.19\)](#)
 - [Solve equations using square roots \(8-F.20\)](#)
 - [Cube roots of positive perfect cubes \(8-F.21\)](#)
 - [Solve equations using cube roots \(8-F.23\)](#)
 - **8.EE.A.3 Use numbers expressed in the form of a single digit multiplied by an integer power of 10 to estimate very large or very small quantities, and express how many times as much one is than the other.**
 - [Convert between standard and scientific notation \(8-G.1\)](#)
 - [Compare numbers written in scientific notation \(8-G.2\)](#)
 - **8.EE.A.4 Perform operations with numbers expressed in scientific notation, including problems where both decimal and scientific notation are used. Use scientific notation and choose units of appropriate size for measurements of very large or very small quantities (e.g., use millimeters per year for seafloor spreading). Interpret scientific notation that has been generated by technology.**
 - [Scientific notation on calculators \(8-G.\)](#)
 - [Add and subtract numbers written in scientific notation \(8-G.3\)](#)
 - [Multiply numbers written in scientific notation \(8-G.4\)](#)
 - [Divide numbers written in scientific notation \(8-G.5\)](#)
 - **Checkpoint opportunity**
 - [Checkpoint: Integer exponents \(8-F.\)](#)
 - [Checkpoint: Square and cube roots \(8-F.\)](#)
 - [Checkpoint: Scientific notation \(8-G.\)](#)
- **8.EE.B Understand the connections between proportional relationships, lines, and linear equations.**
 - **8.EE.B.5 Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways.**

- [Find the constant of proportionality from a graph \(8-I.4\)](#)
 - [Graph proportional relationships and find the slope \(8-I.8\)](#)
 - **8.EE.B.6 Use similar triangles to explain why the slope m is the same between any two distinct points on a non-vertical line in the coordinate plane. Derive the equation $y = mx$ for a line through the origin and the equation $y = mx + b$ for a line intercepting the vertical axis at b .**
 - [Find the slope of a graph \(8-Y.1\)](#)
 - [Find the slope from two points \(8-Y.2\)](#)
 - [Slope-intercept form: find the slope and y-intercept \(8-Y.4\)](#)
 - [Graph a line using slope \(8-Y.5\)](#)
 - [Graph a line from an equation in slope-intercept form \(8-Y.6\) \(84\)](#)
 - [Write a linear equation from a graph \(8-Y.9\)](#)
 - **Checkpoint opportunity**
 - [Checkpoint: Proportional relationships \(8-I.\)](#)
 - [Checkpoint: Slope and linear equations \(8-Y.\)](#)
- **8.EE.C Analyze and solve linear equations and pairs of simultaneous linear equations.**
 - **8.EE.C.7 Solve linear equations in one variable.**
 - **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).**
 - [Find the number of solutions \(8-W.15\)](#)
 - [Create equations with no solutions or infinitely many solutions \(8-W.16\)](#)
 - **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.**
 - [Model and solve equations using algebra tiles \(8-W.3\)](#)
 - [Solve two-step equations \(8-W.8\) \(90\)](#)
 - [Solve multi-step equations \(8-W.9\)](#)
 - [Solve equations involving like terms \(8-W.10\)](#)
 - [Solve equations with variables on both sides \(8-W.11\)](#)
 - [Solve equations: mixed review \(8-W.12\)](#)
 - [Solve equations: complete the solution \(8-W.13\)](#)
 - [Solve one-step and two-step equations: word problems \(8-W.14\)](#)
 - **8.EE.C.8 Analyze and solve pairs of simultaneous linear equations.**
 - **8.EE.C.8.a Understand that solutions to a system of two linear equations in two variables correspond to points of intersection of their graphs, because points of intersection satisfy both equations simultaneously.**
 - [Is \$\(x, y\)\$ a solution to the system of equations? \(8-AA.1\)](#)
 - [Solve a system of equations by graphing \(8-AA.2\)](#)
 - [Find the number of solutions to a system of equations by graphing \(8-AA.4\)](#)

- **8.EE.C.8.b Solve systems of two linear equations in two variables algebraically (using substitution and elimination strategies), and estimate solutions by graphing the equations. Solve simple cases by inspection.**
 - [Find the number of solutions to a system of equations \(8-AA.5\)](#)
 - [Solve a system of equations using substitution \(8-AA.8\)](#)
 - [Solve a system of equations using elimination \(8-AA.10\)](#)
 - [Solve a system of equations using any method \(8-AA.12\)](#)
- **8.EE.C.8.c Solve real-world and mathematical problems leading to two linear equations in two variables.**
 - [Solve a system of equations by graphing: word problems \(8-AA.3\) \(91\)](#)
 - [Solve a system of equations using substitution: word problems \(8-AA.9\)](#)
 - [Solve a system of equations using elimination: word problems \(8-AA.11\)](#)
 - [Solve a system of equations using any method: word problems \(8-AA.13\)](#)
- **Checkpoint opportunity**
 - [Checkpoint: Solve linear equations \(8-W.\)](#)
 - [Checkpoint: Systems of equations \(8-AA.\)](#)