

Unit 4: Linear Equations and Linear Systems[Open Up Family Resource Link](#)

| Lesson | Skill | Online Resources | Standard |
|--------|--|---|---------------------|
| 1 | Solve puzzle problems using diagrams, equations, or other representations. | https://www.solveemoji.com/Puzzle/Index/ https://www.mathplayground.com/algebra_puzzle.html https://solve.me.edc.org/ | 8.EE.C |
| 2 | Represent balanced hangers with equations. Add or remove blocks from a hanger and keep the hanger balanced. | https://solve.me.edc.org/ https://www.khanacademy.org/math/cc-sixth-grade-math/cc-6th-equations-and-inequalities/cc-6th-solving-equations/v/one-step-equation-intuition http://mathematicalmusings.org/2017/07/19/truth-and-consequences-talking-about-solving-equations/ | 8.EE.C |
| 3 | Add, subtract, multiply, or divide each side of an equation by the same expression to get a new equation with the same solution. | https://www.khanacademy.org/math/algebra/one-variable-linear-equations/alg1-one-step-add-sub-equations/v/adding-and-subtracting-the-same-thing-from-both-sides https://www.ixl.com/math/grade-8/solve-one-step-equations | 8.EE.C, 8.EE.C.7 |
| 4 | Make sense of multiple ways to solve an equation. | https://www.khanacademy.org/math/algebra/one-variable-linear-equations/alg1-two-steps-equations-intro/v/why-we-do-the-same-thing-to-both-sides-two-step-equations https://www.ixl.com/math/grade-8/solve-two-step-equations https://www.ixl.com/math/grade-8/solve-multi-step-equations https://www.ixl.com/math/grade-8/solve-equations-involving-like-terms https://www.khanacademy.org/math/cc-seventh-grade-math/cc-7th-variables-expressions/cc-8th-two-step-equations-dec-fraction/e/find-the-mistake-two-step-equations | 8.EE.C, 8.EE.C.7 |
| 5 | Solve an equation where the variable appears on both sides. | https://www.khanacademy.org/math/algebra/one-variable-linear-equations/alg1-variables-on-both-sides/v/why-we-do-the-same-thing-to-both-sides-multi-step-equations https://www.khanacademy.org/math/algebra/one-variable-linear-equations/alg1-variables-on- | 8.EE.C, 8.EE.C.7 |

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| | | both-sides/v/equations-3 https://www.khanacademy.org/math/algebra/one-variable-linear-equations/alg1-variables-on-both-sides/e/linear-equations-3 https://www.ixl.com/math/grade-8/solve-equations-with-variables-on-both-sides | |
| 6 | Solve linear equations in one variable. | https://www.ixl.com/math/grade-8/solve-equations-mixed-review https://www.ixl.com/math/grade-8/solve-equations-complete-the-solution | 8.EE.C.7b, 8.EE.C.7 |
| 7 | Determine whether an equation has no solutions, one solution, or infinitely many solutions. | https://www.khanacademy.org/math/algebra/one-variable-linear-equations/alg1-number-of-solutions-to-linear-equations/v/number-of-solutions-to-linear-equations https://www.ixl.com/math/grade-8/find-the-number-of-solutions | 8.EE.C.7a |
| 8 | Solve equations with different numbers of solutions. | https://www.khanacademy.org/math/algebra/one-variable-linear-equations/alg1-number-of-solutions-to-linear-equations/v/number-of-solutions-to-linear-equations-ex-2 https://www.khanacademy.org/math/algebra/one-variable-linear-equations/alg1-number-of-solutions-to-linear-equations/v/number-of-solutions-to-linear-equations-ex-3 https://www.ixl.com/math/grade-8/create-equations-with-no-solutions-or-infinitely-many-solutions | 8.EE.C.7a |
| 9 | Use an expression to find when two things, like height, are the same in a real-world situation. | https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-systems-topic/systems-overview-8g/v/king-s-cupcakes-solving-systems-by-elimination https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-systems-topic/systems-overview-8g/v/how-many-bags-of-potato-chips-do-people-eat https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-systems-topic/systems-overview-8g/v/solving-systems-with-substitution | 8.EE.C, 8.EE.C.7, 8.EE.C.8 |
| 10 | Interpret ordered pairs that are solutions to an equation. I can identify ordered pairs that are solutions to an equation. | https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-systems-topic/cc-8th-systems-graphically/a/systems-of-equations-with-graphing https://www.ixl.com/math/grade-8/is-x-y-a-solution-to-the-system-of-equations | 8.EE.C, 8.EE.C.8 |

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| 11 | Use graphs to find an ordered pair that two real-world situations have in common. | https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-systems-topic/cc-8th-systems-graphically/v/graphical-systems-application-problem https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-systems-topic/cc-8th-systems-graphically/e/graphing_systems_of_equations | 8.EE.C.8 |
| 12 | <p>Explain the solution to a system of equations in a real-world context.</p> <p>Explain what a system of equations is.</p> <p>Make graphs to find an ordered pair that two real-world situations have in common.</p> | https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-systems-topic/cc-8th-systems-graphically/a/systems-of-equations-with-graphing https://www.ixl.com/math/grade-8/solve-a-system-of-equations-by-graphing https://www.ixl.com/math/grade-8/solve-a-system-of-equations-by-graphing-word-problems | 8.EE.C.8a, 8.EE.C.8b, 8.EE.C.8 |
| 13 | Solve systems of equations using algebra. | https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-systems-topic/cc-8th-systems-elimination/v/solving-systems-by-elimination-2 https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-systems-topic/cc-8th-systems-elimination/e/systems_of_equations_with_elimination_0.5 https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-systems-topic/cc-8th-systems-with-substitution/v/the-substitution-method https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-systems-topic/cc-8th-systems-with-substitution/e/systems_of_equations_with_substitution https://www.ixl.com/math/grade-8/solve-a-system-of-equations-using-substitution https://www.ixl.com/math/grade-8/solve-a-system-of-equations-using-elimination | 8.EE.C.8a, 8.EE.C.8 |
| 14 | Use the structure of equations to help me figure out how many solutions a system of equations has. | https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-systems-topic/cc-8th-systems-solutions/v/inconsistent-systems-of-equations https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-systems-topic/cc-8th-systems-solutions/v/solving-systems-by-graphing-2 https://www.ixl.com/math/grade-8/find-the-number-of-solutions-to-a-system-of-equations-by-graphing https://www.ixl.com/math/grade-8/find-the-number-of-solutions-to-a-system-of-equations https://www.ixl.com/math/grade-8/classify-a-system-of-equations-by-graphing | 8.EE.C.8 |

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| 15 | Write a system of equations from a real-world situation. | https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-systems-topic/cc-8th-systems-word-problems/v/ex-1-age-word-problem https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-systems-topic/cc-8th-systems-word-problems/v/ex-2-age-word-problem https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-systems-topic/cc-8th-systems-word-problems/v/ex-3-age-word-problem https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-systems-topic/cc-8th-systems-word-problems/e/age_word_problems | 8.EE.C.8b, 8.EE.C.8 |
| 16 | Use a system of equations to represent a real-world situation and answer questions about the situation. | https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-systems-topic/cc-8th-systems-word-problems/v/system-of-equations-distances-word-problem https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-systems-topic/cc-8th-systems-word-problems/e/understanding-systems-of-equations-word-problems https://www.ixl.com/math/grade-8/solve-a-system-of-equations-using-substitution-word-problems https://www.ixl.com/math/grade-8/solve-a-system-of-equations-using-elimination-word-problems | 8.EE.C.8 |