Gizmos

Vocabulary: Solving Linear Systems (Standard Form)

Vocabulary

- <u>Elimination method</u> an algebraic method for solving systems of equations that involves adding or subtracting the two equations to eliminate one of the variables.
- <u>Solution</u> a value or values that make an equation or system of equations true.
 - For example, (2, 7) is a solution of the equation y = 3x + 1 because it makes the equation true: 7 = 3(2) + 1.
- <u>Standard form (of a linear equation)</u> a linear equation of the form Ax + By = C, where *A*, *B*, and *C* are real numbers, and *A* and *B* are not both zero.
- <u>Substitution method</u> an algebraic method for solving systems of equations that involves solving one equation for a variable and substituting the resulting expression into the other equation.
- <u>System of linear equations</u> a set of two or more linear equations that contain the same variables.

	Intersecting lines	Same line	Parallel lines
Graph	€ -6 -4 -2 - 2 - 4 6 8 - 8 -6 -4 -2 - 2 - 4 6 8 - 8 -6 -4 -2 - 2 - 4 6 8 - 8 -6 -4 - 2 - 2 - 4 - 8 - 8 - 6 - 4 - 2 - 9 - 9 - 9 - 9 - 9 - 9 - 9 - 9	6 6 4 4 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	
Number of solutions	exactly one	infinitely many	none
Type of system	consistent and independent	consistent and dependent	inconsistent

 A system of linear equations can have one solution, no solution, or infinitely many solutions, as shown below:

