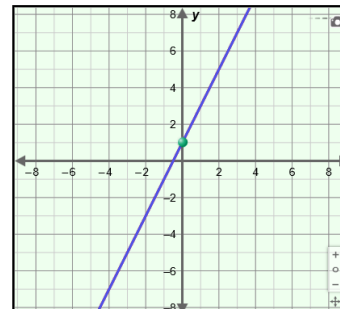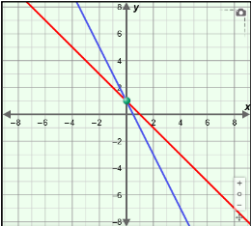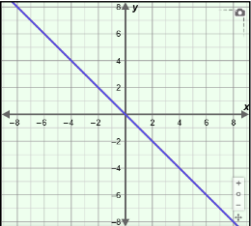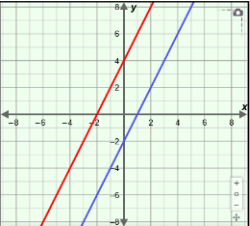# Vocabulary: Solving Linear Systems (Slope-Intercept Form)

Vocabulary

- Slope-intercept form – a linear equation of the form $y = mx + b$, where m is the slope and b is the y-intercept.

  - For example, the line with the equation $y = 2x + 1$, shown to the right, has a slope of 2 and a y-intercept of 1.

- Solution – a value that makes an equation or inequality true.

  - For example, (2, 7) is a solution of the equation $y = 3x + 1$ because it makes the equation true: $7 = 3(2) + 1$.

- Substitution method – an algebraic method for solving systems of equations that involves solving one equation for a variable and substituting that expression into the other equation.

- System of linear equations – a set of two or more linear equations that contain the same variables.

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

	Intersecting lines	Same line	Parallel lines
Graph			
Number of solutions	exactly one	infinitely many	none
Type of system	consistent and independent	consistent and dependent	inconsistent