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* = 2*x* + 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* = 3*x* + 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:

|  |  |  |  |
| --- | --- | --- | --- |
| **Graph** | Intersecting lines120Vocab2 | Same line120Vocab3 | Parallel lines120Vocab4 |
| **Number of solutions** | exactly one | infinitely many | none |
| **Type of system** | consistent and independent | consistent and dependent | inconsistent |