**NAME**

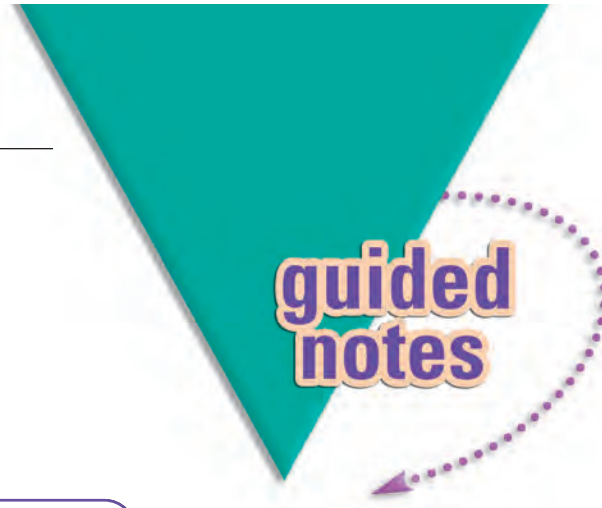**Module 7**   Solving Linear Equations and Inequalities of Two Variables

**Lesson 1**   Defining Linear Equations of Two Variables and Their Solutions

guided notes

## Lesson Objectives

- Find solutions to linear equations of two variables and write them as ordered pairs.
- Graph points on the Cartesian Coordinate System.
- Graph horizontal and vertical lines from equations.

Because $(x, y)$ has a first number $x$ and a second number $y$ it is called an _____**ordered pair**_____.

**1** ▸ Find the solution to $x + 2y = 6$ when $y$ is equal to zero.  **(6, 0)**

**2** ▸ Find the solution to $x + 2y = 6$ when $x$ is equal to eight.  **(8, –1)**

**3** ▸ Find the solution to $x + 2y = 6$ when $y$ is equal to one.  **(4, 1)**

**4** ▸ Find the solution to $x + 2y = 6$ when $x$ is equal to negative one.

$$\left(-1,\ 3\tfrac{1}{2}\right)$$

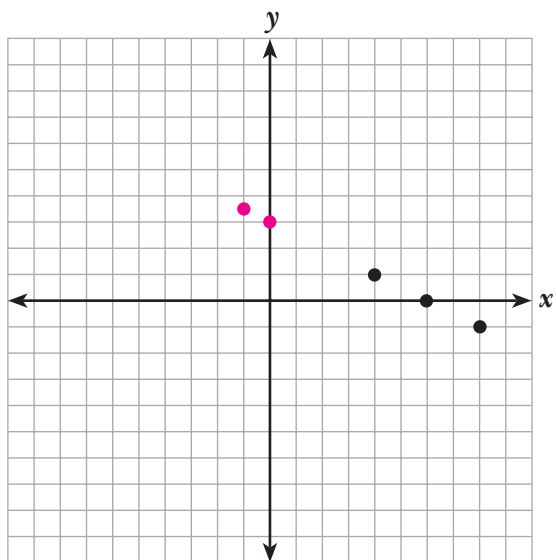In the Cartesian Coordinate System, the horizontal axis is called the _____**x-axis**_____.

The vertical axis is called the _____**y-axis**_____.

The axes intersect at a point called the _____**origin**_____.

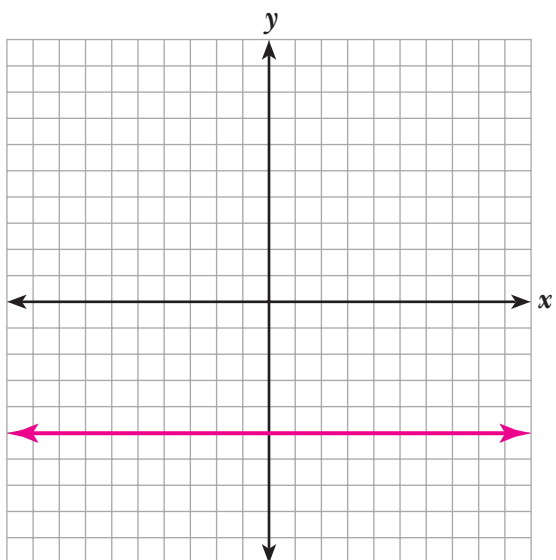The axes are called coordinate axes, and they form the _____**coordinate**_____ plane.

**5** ▶ Plot the point (0, 3) on the same coordinate plane.

**6** ▶ Plot the point $\left(-1,\ 3\frac{1}{2}\right)$ on the same coordinate plane.

The graph of any equation of the form $y = b$ is

a ___**horizontal**___ line.

The $y$-coordinate of any point on the line is

___**b**___.

**8** ▶ Graph all the solutions to the equation $x = 7$.

The solutions to a ___**linear**___

equation of two variables lie on a line.
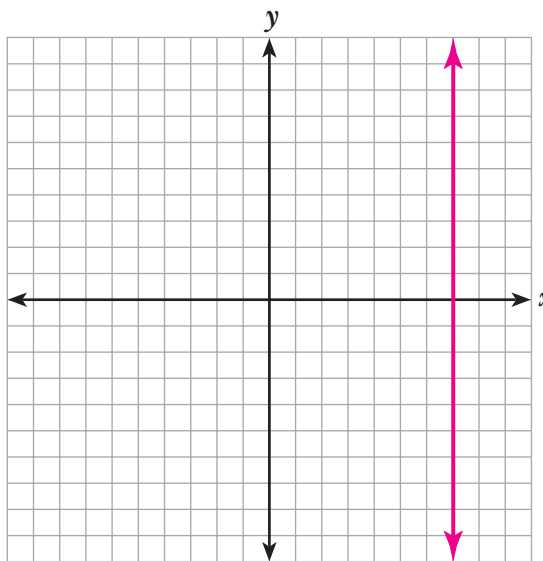
**7** ▶ Graph all the solutions to the equation $y = -5$.

The graph of any equation of the form $x = a$ is

a ___**vertical**___ line.

The $x$-coordinate of any point on the line is

___**a**___.