Lesson 1.5.3: Graphs of Linear Equations

Graphing linear equations can be done using any of the four methods:

- 1. Using two points
- 2. Using the x- and y-intercepts
- 3. Using the slope and the y-intercept
- 4. Using the slope and a point

How to Graph Linear Equations Using Two Points:

- 1. Assign any two values for x.
- 2. Find the values for y to determine the ordered pairs of two
- 3. Plot the two points and connect them.

How to Graph Linear Equations Using the x- and yintercepts:

- 1. Let y = 0 to find the x-intercept.
- 2. Let x = 0 to find the y-intercept.
- 3. Plot the two points and connect them.

How to Graph Linear Equations Using the Slope and yintercept:

- 1. Let x = 0 to find the y-intercept.
- 2. Plot the y-intercept.
- 3. Use the slope to get the other point.
- 4. Connect the two points.

How to Graph Linear Equations Using the Slope and a Point:

Lesson 1.5.3: Graphs of Linear Equations

How to Graph Linear Equations Using Two Points:

2. Find the values for y to determine the ordered pairs of two

How to Graph Linear Equations Using the x- and y-

How to Graph Linear Equations Using the Slope and y-

Graphing linear equations can be done using any of the four

- 1. Plot the given point.
- 2. Use the slope to get the other point.
- 3. Connect the two points.

Practice Exercises 1.5.3

A. Graph each linear equation using two points.

1.
$$y = 3x + 4$$

1. Using two points

2. Using the x- and y-intercepts

4. Using the slope and a point

1. Assign any two values for x.

3. Using the slope and the y-intercept

3. Plot the two points and connect them.

3. Plot the two points and connect them.

3.
$$4y = 3x - 12$$

2.
$$x = 2y$$

methods:

intercepts:

intercept:

4.
$$5 = 5x + y$$

B. Graph each linear equation using the x- and y-intercepts.

B. Graph each linear equation using the x- and y-intercepts.

D. Graph each linear equation using the slope and a point.

A. Graph each linear equation using the x- and y-intercepts.

B. Graph each linear equation using the slope and the y-intercept.

C. Graph each linear equation using the slope and the y-intercept.

3. 20 = 5x - 4y4. $\frac{x}{2} + \frac{y}{3} = 1$

3. 4y = 3x - 12

4. 3(x+2) = y

4. $\frac{x}{2} + \frac{y}{2} = 1$

3. 8y = 4x + 164. $\frac{x}{-3} + \frac{y}{3} = 1$

3. -2x = y + 6

4. 7x - 10 + 5y = 0

1.
$$x - 3y = 9$$

1. x - 3y = 9

1. -6 = 3y

1. x - 12 = 3y

1. 2x + 5y = 10

2. 4x - 3y = 12

1. 2x - 5y = -10

2. 2(y-x)=4

2. x = 2y

2. x = 4y

Activity 1.5.3

2. 6y + x = -6

2.
$$6y + x = -6$$

3.
$$20 = 5x - 4y$$

4. $\frac{x}{2} + \frac{y}{3} = 1$

- C. Graph each linear equation using the slope and the y-intercept.
 - 1. -6 = 3y

2.
$$x = 2y$$

3.
$$4y = 3x - 12$$

4. $3(x+2) = y$

D. Graph each linear equation using the slope and a point.

1.
$$x - 12 = 3y$$

2.
$$x = 4y$$

3.
$$20 = 5x - 4y$$

4. $\frac{x}{2} + \frac{y}{3} = 1$

Activity 1.5.3

A. Graph each linear equation using the x- and y-intercepts.

1.
$$2x + 5y = 10$$

2.
$$4x - 3y = 12$$

3.
$$8y = 4x + 16$$

4. $\frac{x}{-3} + \frac{y}{3} = 1$

B. Graph each linear equation using the slope and the y-intercept.

1.
$$2x - 5y = -10$$

3.
$$-2x = y + 6$$

2.
$$2(y-x)=4$$

4.
$$7x - 10 + 5y = 0$$

1. Let y = 0 to find the x-intercept. 2. Let x = 0 to find the y-intercept.

- 3. Use the slope to get the other point.
- 4. Connect the two points.

How to Graph Linear Equations Using the Slope and a Point:

- 1. Plot the given point.
- 2. Use the slope to get the other point.
- 3. Connect the two points.

Practice Exercises 1.5.3

A. Graph each linear equation using two points.

1.
$$y = 3x + 4$$

3.
$$4y = 3x - 12$$

2.
$$x = 2y$$

4.
$$5 = 5x + y$$