## Lesson 1.6.3: Finding the Equation of a Line Given the Slope and the Intercepts

The equation of a line can be determined using the following

1. Slope-Intercept Form: y = mx + b

2. Intercept Form:  $\frac{x}{a} + \frac{y}{b} = 1$ 

#### Practice Exercises 1.6.3

A. Write the equation of the line in standard form given the slope and the v-intercept.

1. 
$$m = 3, b = 2$$

4. 
$$m = -1$$
,  $b = \frac{1}{2}$ 

2. 
$$m = \frac{3}{2}, b = -5$$

1. 
$$m = 3$$
,  $b = 2$   
2.  $m = \frac{3}{2}$ ,  $b = -5$   
3.  $m = -6$ ,  $b = -3$   
4.  $m = -1$ ,  $b = \frac{1}{2}$   
5.  $m = \frac{7}{2}$ ,  $b = \frac{3}{2}$ 

B. Write the equation of the line with the given x-intercept and y-intercept.

1. 
$$a = 2; b = -3$$

4. 
$$(0,-2);(1,0)$$

2. 
$$a = -5$$
;  $b = 8$ 

3. 
$$a = -2$$
;  $b = 6$ 

# Activity 1.6.3

A. Write the equation of the line in standard form given the slope and the y-intercept.

1. 
$$m = -2$$
,  $b = 3$ 

4. 
$$m = -3$$
,  $b = \frac{3}{2}$ 

2. 
$$m = \frac{2}{3}$$
,  $b = -3$   
3.  $m = -5$ ,  $b = -1$ 

5. 
$$m = \frac{6}{5}$$
,  $b = \frac{4}{3}$ 

B. Write the equation of the line with the given x-intercept and v-intercept.

1. 
$$a = 1; b = 5$$

4. 
$$(-5,0)$$
;  $(0,-4)$ 

2. 
$$a = 3; b = -4$$

5. 
$$(-6,0)$$
;  $(0,2)$ 

## Lesson 1.6.3: Finding the Equation of a Line Given the Slope and the Intercepts

The equation of a line can be determined using the following formulae:

1. Slope-Intercept Form: y = mx + b

2. Intercept Form:  $\frac{x}{a} + \frac{y}{b} = 1$ 

### Practice Exercises 1.6.3

A. Write the equation of the line in standard form given the slope and the y-intercept.

1. 
$$m = 3$$
,  $b = 2$   
2.  $m = \frac{3}{2}$ ,  $b = -5$   
4.  $m = -1$ ,  $b = \frac{1}{2}$ 

4. 
$$m = -1$$
,  $b = \frac{1}{2}$ 

2. 
$$m = \frac{3}{2}, b = -1$$

3. 
$$m = -6$$
,  $b = -3$ 

$$m = -6, b = -3$$
 5.  $m = \frac{7}{2}, b = \frac{3}{2}$ 

B. Write the equation of the line with the given x-intercept and y-intercept.

1. 
$$a = 2; b = -3$$

2. 
$$a = -5$$
;  $b = 8$ 

3. 
$$a = -2$$
;  $b = 6$ 

# Activity 1.6.3

A. Write the equation of the line in standard form given the slope and the y-intercept.

1. 
$$m = -2, b =$$

4. 
$$m = -3$$
,  $b = \frac{3}{2}$ 

1. 
$$m = -2$$
,  $b = 3$   
2.  $m = \frac{2}{3}$ ,  $b = -3$   
3.  $m = -5$ ,  $b = -1$   
4.  $m = -3$ ,  $b = \frac{3}{2}$   
5.  $m = \frac{6}{5}$ ,  $b = \frac{4}{3}$ 

5. 
$$m = \frac{6}{5}$$
,  $b = \frac{6}{5}$ 

B. Write the equation of the line with the given x-intercept and y-intercept.

1. 
$$a = 1; b = 5$$

2. 
$$a = 3; b = -4$$

5. 
$$(-6,0)$$
;  $(0,2)$ 

### Lesson 1.6.3: Finding the Equation of a Line Given the Slope and the Intercepts

The equation of a line can be determined using the following

1. Slope-Intercept Form: y = mx + b

2. Intercept Form:  $\frac{x}{a} + \frac{y}{b} = 1$ 

#### Practice Exercises 1.6.3

A. Write the equation of the line in standard form given the slope and the y-intercept.

1. 
$$m = 3$$
,  $b = 2$ 

4. 
$$m = -1$$
,  $b = \frac{1}{2}$ 

2. 
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3.  $m = -6$ ,  $b = -3$   
4.  $m = -1$ ,  $b = \frac{1}{2}$   
5.  $m = \frac{7}{2}$ ,  $b = \frac{3}{2}$ 

B. Write the equation of the line with the given x-intercept and y-intercept.

1. 
$$a = 2; b = -3$$

2. 
$$a = -5; b = 8$$

3. 
$$a = -2$$
;  $b = 6$ 

#### Activity 1.6.3

A. Write the equation of the line in standard form given the slope and the y-intercept.

1. 
$$m = -2$$
,  $b = 3$ 

1. 
$$m = -2$$
,  $b = 3$  4.  $m = -3$ ,  $b = \frac{3}{2}$ 

2. 
$$m = \frac{2}{3}$$
,  $b = -3$   
3.  $m = -5$ ,  $b = -1$ 

5. 
$$m = \frac{6}{5}$$
,  $b = \frac{4}{3}$ 

B. Write the equation of the line with the given x-intercept and v-intercept.

1. 
$$a = 1; b = 5$$

4. 
$$(-5,0)$$
;  $(0,-4)$ 

2. 
$$a = 3; b = -4$$

5. 
$$(-6,0);(0,2)$$

## Lesson 1.6.3: Finding the Equation of a Line Given the Slope and the Intercepts

The equation of a line can be determined using the following formulae:

1. Slope-Intercept Form: y = mx + b

2. Intercept Form:  $\frac{x}{a} + \frac{y}{b} = 1$ 

### Practice Exercises 1.6.3

A. Write the equation of the line in standard form given the slope and the y-intercept.

1. 
$$m = 3$$
,  $b =$ 

4. 
$$m = -1$$
,  $b = \frac{1}{2}$ 

1. 
$$m = 3$$
,  $b = 2$   
2.  $m = \frac{3}{2}$ ,  $b = -5$   
4.  $m = -1$ ,  $b = \frac{1}{2}$ 

3. 
$$m = -6$$
,  $b = -3$  5.  $m = \frac{7}{2}$ ,  $b = \frac{3}{2}$ 

B. Write the equation of the line with the given x-intercept and y-intercept.

1. 
$$a = 2$$
;  $b = -3$   
2.  $a = -5$ ;  $b = 8$ 

3. 
$$a = -2$$
;  $b = 6$ 

# Activity 1.6.3

A. Write the equation of the line in standard form given the slope and the y-intercept.

4. 
$$m = -3$$
,  $b = \frac{1}{2}$ 

2. 
$$m = \frac{1}{3}, b = -3$$

1. 
$$m = -2$$
,  $b = 3$   
2.  $m = \frac{2}{3}$ ,  $b = -3$   
3.  $m = -5$ ,  $b = -1$   
4.  $m = -3$ ,  $b = \frac{3}{2}$   
5.  $m = \frac{6}{5}$ ,  $b = \frac{4}{3}$ 

B. Write the equation of the line with the given x-intercept and y-intercept.

1. 
$$a = 1; b = 5$$

4. 
$$(-5,0);(0,-4)$$

2. 
$$a = 3$$
;  $b = -4$   
3.  $(3,0)$ ;  $(0,3)$ 

5. 
$$(-6,0);(0,2)$$