

1. Find the equation of the line described below. Write the linear equation as  $y = mx + b$  and choose the intervals that contain  $m$  and  $b$ .

Perpendicular to  $7x + 4y = 14$  and passing through the point  $(7, -7)$ .

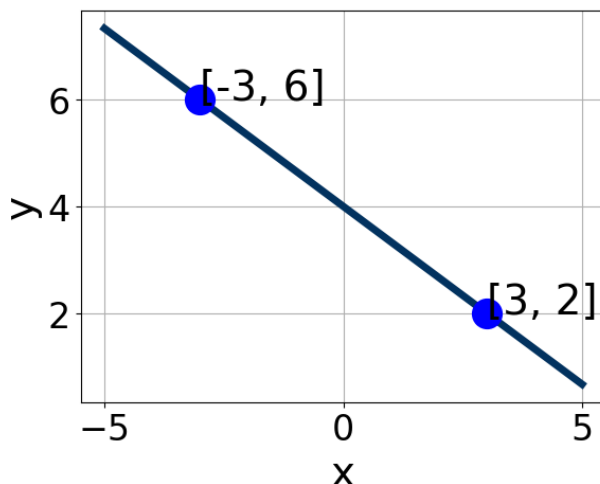
- A.  $m \in [1.7, 1.79]$   $b \in [-11, -10]$
  - B.  $m \in [-0.13, 1.73]$   $b \in [-15, -12]$
  - C.  $m \in [-0.92, -0.25]$   $b \in [-4, -1]$
  - D.  $m \in [-0.13, 1.73]$   $b \in [-11, -10]$
  - E.  $m \in [-0.13, 1.73]$   $b \in [5, 14]$
- 

2. Solve the linear equation below. Then, choose the interval that contains the solution.

$$\frac{5x - 9}{5} - \frac{4x + 5}{2} = \frac{6x - 4}{7}$$

- A.  $x \in [-3.01, -1.01]$
  - B.  $x \in [-0.32, 4.68]$
  - C.  $x \in [-6.38, -2.38]$
  - D.  $x \in [-1.75, 0.25]$
  - E. There are no real solutions.
- 

3. Write the equation of the line in the graph below in Standard form  $Ax + By = C$ . Then, choose the intervals that contain  $A$ ,  $B$ , and  $C$ .



- A.  $A \in [0.49, 0.86]$ ,  $B \in [0.63, 1.25]$ , and  $C \in [4, 8]$   
 B.  $A \in [1.52, 2.72]$ ,  $B \in [2.17, 4.72]$ , and  $C \in [10, 15]$   
 C.  $A \in [-2.41, -1.9]$ ,  $B \in [-3.08, -1.5]$ , and  $C \in [-13, -6]$   
 D.  $A \in [1.52, 2.72]$ ,  $B \in [-3.08, -1.5]$ , and  $C \in [-13, -6]$   
 E.  $A \in [0.49, 0.86]$ ,  $B \in [-1.35, 0.24]$ , and  $C \in [-6, -2]$

4. First, find the equation of the line containing the two points below. Then, write the equation as  $y = mx + b$  and choose the intervals that contain  $m$  and  $b$ .

$(-9, 5)$  and  $(4, 2)$

- A.  $m \in [-0.84, 0.18]$   $b \in [13.82, 14.55]$   
 B.  $m \in [-0.84, 0.18]$   $b \in [-3.52, -2.74]$   
 C.  $m \in [-0.84, 0.18]$   $b \in [1.23, 3.07]$   
 D.  $m \in [0.08, 0.34]$   $b \in [0.63, 1.19]$   
 E.  $m \in [-0.84, 0.18]$   $b \in [-2.16, -1.59]$

5. Solve the linear equation below. Then, choose the interval that contains the solution.

$$\frac{-5x + 9}{8} - \frac{-6x - 5}{2} = \frac{5x - 5}{3}$$

- A.  $x \in [-29.4, -26.1]$
  - B.  $x \in [0.8, 2.7]$
  - C.  $x \in [-2.1, 0.4]$
  - D.  $x \in [-8.6, -7.2]$
  - E. There are no real solutions.
- 

6. Find the equation of the line described below. Write the linear equation as  $y = mx + b$  and choose the intervals that contain  $m$  and  $b$ .

Perpendicular to  $9x - 8y = 14$  and passing through the point  $(4, -3)$ .

- A.  $m \in [-1.08, -0.82]$   $b \in [0.22, 0.94]$
  - B.  $m \in [-1.18, -1.1]$   $b \in [0.22, 0.94]$
  - C.  $m \in [-1.08, -0.82]$   $b \in [-1.3, 0.09]$
  - D.  $m \in [-1.08, -0.82]$   $b \in [-7.87, -6.86]$
  - E.  $m \in [0.85, 1.22]$   $b \in [-6.81, -6.13]$
- 

7. First, find the equation of the line containing the two points below. Then, write the equation as  $y = mx + b$  and choose the intervals that contain  $m$  and  $b$ .

$(-3, -7)$  and  $(2, -3)$

- A.  $m \in [0.5, 1.5]$   $b \in [-4.08, -3.23]$
  - B.  $m \in [-2.2, 0.4]$   $b \in [-1.59, -1.1]$
  - C.  $m \in [0.5, 1.5]$   $b \in [4.26, 5.01]$
  - D.  $m \in [0.5, 1.5]$   $b \in [-4.72, -4.19]$
  - E.  $m \in [0.5, 1.5]$   $b \in [-5.83, -4.98]$
- 

8. Solve the equation below. Then, choose the interval that contains the solution.

$$-11(-10x + 18) = -9(-4x - 16)$$

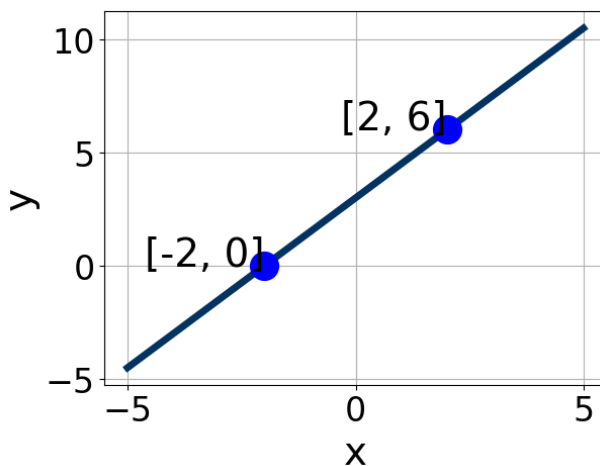
- A.  $x \in [-0.04, 0.7]$
- B.  $x \in [4.47, 5.01]$
- C.  $x \in [0.64, 0.79]$
- D.  $x \in [-0.88, -0.62]$
- E. There are no real solutions.

- 
9. Solve the equation below. Then, choose the interval that contains the solution.

$$-3(-17x - 9) = -5(18x + 7)$$

- A.  $x \in [-0.11, -0.03]$
- B.  $x \in [-0.53, -0.38]$
- C.  $x \in [-0.24, -0.2]$
- D.  $x \in [-0.01, 0.09]$
- E. There are no real solutions.

- 
10. Write the equation of the line in the graph below in Standard form  $Ax + By = C$ . Then, choose the intervals that contain  $A$ ,  $B$ , and  $C$ .



- A.  $A \in [-4.6, -1.6]$ ,  $B \in [1.28, 2.52]$ , and  $C \in [4.4, 6.86]$
- B.  $A \in [-2.7, -0.9]$ ,  $B \in [0.16, 1.72]$ , and  $C \in [1.32, 3.87]$

- C.  $A \in [-2.7, -0.9]$ ,  $B \in [-1.94, -0.51]$ , and  $C \in [-5.13, -1.97]$
- D.  $A \in [1.7, 4.2]$ ,  $B \in [-2.35, -1.18]$ , and  $C \in [-6.76, -5.25]$
- E.  $A \in [1.7, 4.2]$ ,  $B \in [1.28, 2.52]$ , and  $C \in [4.4, 6.86]$
-