

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 $5x - 4y = 15$ and passing through the point $(2, -4)$.

- A. $m \in [-1.35, -1.16]$ $b \in [-2.55, -2.34]$
- B. $m \in [-0.88, -0.54]$ $b \in [-6.19, -5.67]$
- C. $m \in [0.65, 1.15]$ $b \in [-5.92, -5.5]$
- D. $m \in [-0.88, -0.54]$ $b \in [2.24, 2.49]$
- E. $m \in [-0.88, -0.54]$ $b \in [-2.55, -2.34]$

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

$$\frac{-5x - 6}{8} - \frac{-3x - 8}{5} = \frac{5x - 6}{4}$$

- A. $x \in [5.56, 6.8]$
- B. $x \in [1.56, 2.13]$
- C. $x \in [0.06, 0.88]$
- D. $x \in [-0.76, 0.03]$
- E. There are no real solutions.

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

$$-14(-13x + 2) = -19(15x - 17)$$

- A. $x \in [1.8, 3.3]$
- B. $x \in [0.7, 2.5]$
- C. $x \in [-1.4, -0.2]$
- D. $x \in [0.3, 0.7]$
- E. There are no real solutions.

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 .

$$(11, 5) \text{ and } (-5, 2)$$

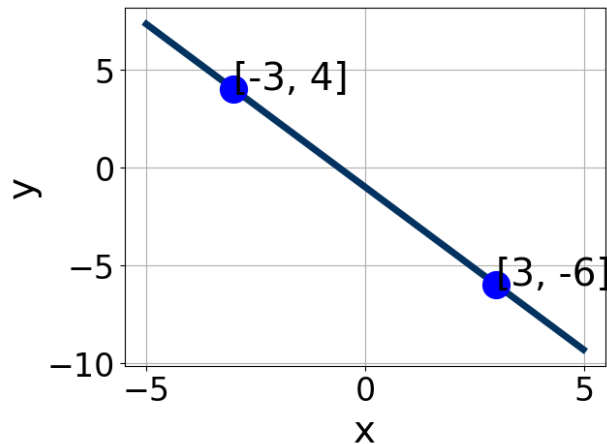
- A. $m \in [0.04, 0.31]$ $b \in [-5.2, -1.4]$
 - B. $m \in [0.04, 0.31]$ $b \in [6.1, 9]$
 - C. $m \in [0.04, 0.31]$ $b \in [2.7, 4.7]$
 - D. $m \in [0.04, 0.31]$ $b \in [-7, -4.3]$
 - E. $m \in [-0.47, 0.08]$ $b \in [-0.7, 1.6]$
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5. First, find the 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 .

$$(8, 3) \text{ and } (-6, 2)$$

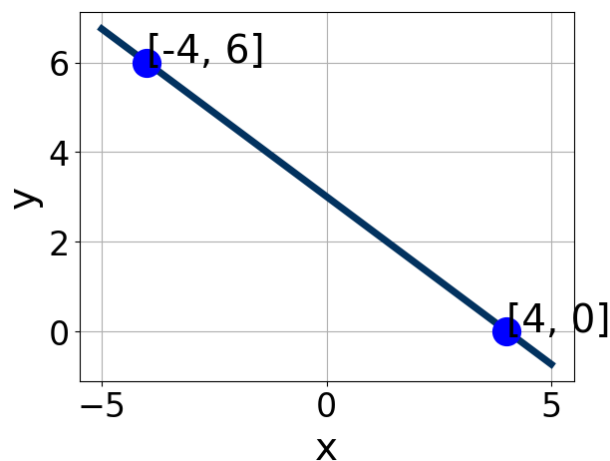
- A. $m \in [-0.05, 0.1]$ $b \in [1.8, 3.5]$
 - B. $m \in [-0.05, 0.1]$ $b \in [-6, -4.6]$
 - C. $m \in [-0.05, 0.1]$ $b \in [-2.6, -1.1]$
 - D. $m \in [-0.05, 0.1]$ $b \in [7.1, 9.4]$
 - E. $m \in [-0.09, 0.04]$ $b \in [0.2, 2.1]$
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6. Write the equation of the line in the graph below in Standard form $Ax + By = C$. Then, choose the intervals that contain A , B , and C .



- A. $A \in [0.7, 3.5]$, $B \in [0.2, 1.18]$, and $C \in [-1.09, -0.56]$
- B. $A \in [0.7, 3.5]$, $B \in [-1.8, -0.81]$, and $C \in [0.78, 2.13]$
- C. $A \in [2.5, 6.3]$, $B \in [-3.1, -2.03]$, and $C \in [1.4, 5.33]$
- D. $A \in [-7.7, -1]$, $B \in [-3.1, -2.03]$, and $C \in [1.4, 5.33]$
- E. $A \in [2.5, 6.3]$, $B \in [2.26, 3.62]$, and $C \in [-4.51, -2.8]$

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7. 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. $A \in [2.4, 5.9]$, $B \in [-6.3, -2.1]$, and $C \in [-14, -8]$
- B. $A \in [-1.3, 2.7]$, $B \in [-2.4, -0.9]$, and $C \in [-5, 1]$
- C. $A \in [-1.3, 2.7]$, $B \in [-0.6, 3.2]$, and $C \in [1, 5]$

D. $A \in [-4.1, -1.6]$, $B \in [-6.3, -2.1]$, and $C \in [-14, -8]$

E. $A \in [2.4, 5.9]$, $B \in [3.1, 4.2]$, and $C \in [10, 18]$

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

$$-7(-19x - 10) = -12(4x - 15)$$

A. $x \in [-2.1, -0.5]$

B. $x \in [1.1, 3.1]$

C. $x \in [-3.1, -2.5]$

D. $x \in [-0.1, 1.2]$

E. There are no real solutions.

9. 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 $8x + 5y = 5$ and passing through the point $(5, 6)$.

A. $m \in [-0.37, 0.9]$ $b \in [1.2, 4]$

B. $m \in [-1.84, -0.28]$ $b \in [7.5, 11.1]$

C. $m \in [-0.37, 0.9]$ $b \in [-0.5, 1.7]$

D. $m \in [1.32, 1.91]$ $b \in [1.2, 4]$

E. $m \in [-0.37, 0.9]$ $b \in [-3, -2.3]$

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

$$\frac{5x + 8}{2} - \frac{5x + 7}{7} = \frac{5x + 8}{4}$$

A. $x \in [-2.2, -1.5]$

B. $x \in [12.3, 14.6]$

C. $x \in [-6, -4.8]$

D. $x \in [-0.1, 0.4]$

E. There are no real solutions.
