

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 $7x - 6y = 11$ and passing through the point $(2, 10)$.

- A. $m \in [-0.98, 0.42]$ $b \in [11.46, 11.73]$
 - B. $m \in [-0.17, 1.98]$ $b \in [8.11, 8.3]$
 - C. $m \in [-0.98, 0.42]$ $b \in [7.93, 8.17]$
 - D. $m \in [-0.98, 0.42]$ $b \in [-11.72, -11.48]$
 - E. $m \in [-1.88, -0.98]$ $b \in [11.46, 11.73]$
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2. Solve the equation below. Then, choose the interval that contains the solution.

$$-3(2x + 4) = -18(6x - 17)$$

- A. $x \in [2.99, 3.3]$
 - B. $x \in [2.29, 2.8]$
 - C. $x \in [-3.2, -2.71]$
 - D. $x \in [2.76, 2.93]$
 - E. There are no real solutions.
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3. Solve the equation below. Then, choose the interval that contains the solution.

$$-3(-4x + 8) = -18(11x - 10)$$

- A. $x \in [0.96, 0.99]$
 - B. $x \in [0.73, 0.76]$
 - C. $x \in [0.77, 0.88]$
 - D. $x \in [-0.77, -0.61]$
 - E. There are no real solutions.
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4. Solve the linear equation below. Then, choose the interval that contains the solution.

$$\frac{-4x + 7}{2} - \frac{-7x - 9}{4} = \frac{-6x - 8}{5}$$

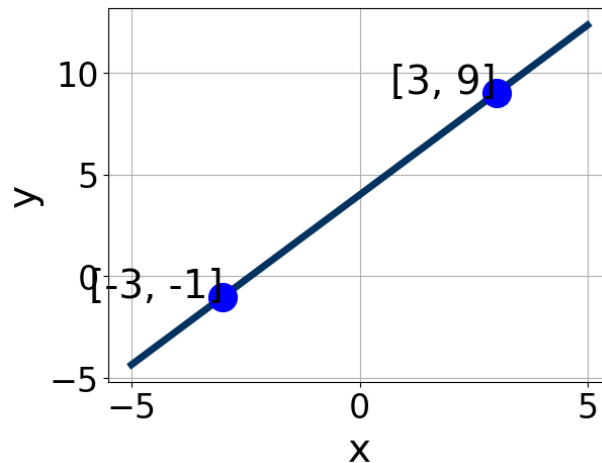
- A. $x \in [-3.8, -2.2]$
 - B. $x \in [-9.1, -7.2]$
 - C. $x \in [-27.2, -23.3]$
 - D. $x \in [-1.3, 1.6]$
 - E. There are no real solutions.
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5. First, find the equation of the line containing the two points below. Then, write the equation as $y = mx + b$ and choose the intervals that contain m and b .

$$(-3, 3) \text{ and } (4, -2)$$

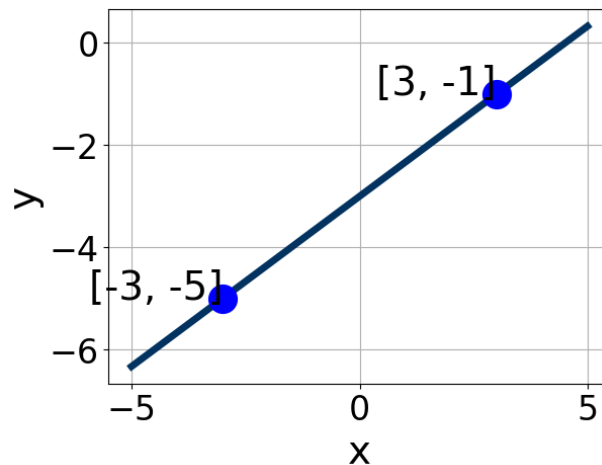
- A. $m \in [-0.55, 1.13]$ $b \in [-5.2, -4.73]$
 - B. $m \in [-0.83, 0.7]$ $b \in [-7.08, -5.35]$
 - C. $m \in [-0.83, 0.7]$ $b \in [0.04, 1.92]$
 - D. $m \in [-0.83, 0.7]$ $b \in [-1.71, -0.3]$
 - E. $m \in [-0.83, 0.7]$ $b \in [4.81, 7.7]$
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6. Write 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. $A \in [1, 7]$, $B \in [-4.29, -2.06]$, and $C \in [-14, -9]$
- B. $A \in [-3.67, 1.33]$, $B \in [0.71, 1.08]$, and $C \in [0, 7]$
- C. $A \in [-3.67, 1.33]$, $B \in [-1.89, -0.45]$, and $C \in [-8, 0]$
- D. $A \in [1, 7]$, $B \in [2.38, 4.43]$, and $C \in [9, 13]$
- E. $A \in [-7, -4]$, $B \in [2.38, 4.43]$, and $C \in [9, 13]$

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. $A \in [-1.1, 0.8]$, $B \in [-1.19, -0.36]$, and $C \in [3, 5]$
- B. $A \in [0.2, 4.6]$, $B \in [-3.08, -2.05]$, and $C \in [6, 10]$
- C. $A \in [-1.1, 0.8]$, $B \in [0.89, 1.62]$, and $C \in [-8, -2]$

D. $A \in [-5.8, -0.7]$, $B \in [2.8, 3.32]$, and $C \in [-11, -7]$

E. $A \in [0.2, 4.6]$, $B \in [2.8, 3.32]$, and $C \in [-11, -7]$

8. 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 .

$(5, 3)$ and $(11, 10)$

A. $m \in [-0.83, 6.17]$ $b \in [-2.54, -1.8]$

B. $m \in [-1.17, -0.17]$ $b \in [22.14, 23.51]$

C. $m \in [-0.83, 6.17]$ $b \in [-3.07, -2.42]$

D. $m \in [-0.83, 6.17]$ $b \in [2.6, 2.94]$

E. $m \in [-0.83, 6.17]$ $b \in [-1.18, -0.59]$

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 $9x + 8y = 11$ and passing through the point $(-7, -3)$.

A. $m \in [0.71, 1.08]$ $b \in [-4, -2.7]$

B. $m \in [0.71, 1.08]$ $b \in [2.4, 3.5]$

C. $m \in [0.71, 1.08]$ $b \in [3.9, 5.3]$

D. $m \in [-1.52, -0.72]$ $b \in [-10.2, -8.8]$

E. $m \in [1.01, 1.65]$ $b \in [2.4, 3.5]$

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

$$\frac{7x - 3}{8} - \frac{7x - 8}{6} = \frac{-6x - 4}{7}$$

A. $x \in [-0.9, -0.1]$

B. $x \in [-3.1, -1]$

- C. $x \in [-16.3, -15.8]$
 - D. $x \in [1.2, 2.1]$
 - E. There are no real solutions.
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