

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 $7x + 8y = 10$ and passing through the point $(2, -9)$.

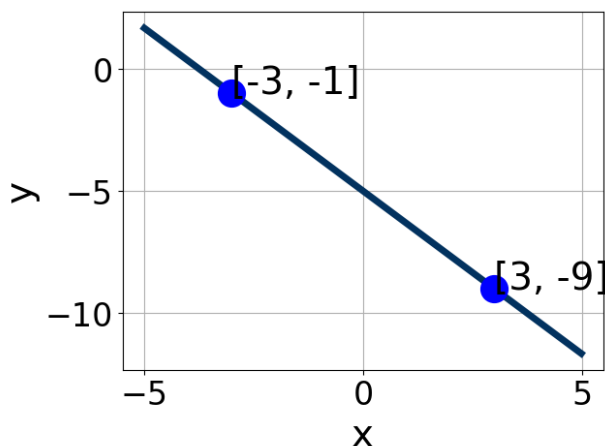
- A. $m \in [0.68, 1.09]$ $b \in [-11.51, -11.03]$
 - B. $m \in [-1.64, -0.83]$ $b \in [-6.99, -6.64]$
 - C. $m \in [1.06, 1.65]$ $b \in [-11.51, -11.03]$
 - D. $m \in [1.06, 1.65]$ $b \in [-11.09, -10.88]$
 - E. $m \in [1.06, 1.65]$ $b \in [11.25, 11.54]$
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2. Solve the linear equation below. Then, choose the interval that contains the solution.

$$\frac{8x - 5}{3} - \frac{6x + 8}{7} = \frac{5x + 6}{6}$$

- A. $x \in [3.7, 6.6]$
 - B. $x \in [1.2, 2]$
 - C. $x \in [16.2, 20.6]$
 - D. $x \in [-1.7, -0.6]$
 - E. There are no real solutions.
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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. $A \in [3, 10]$, $B \in [1.98, 3.41]$, and $C \in [-15, -6]$
 B. $A \in [-6, -1]$, $B \in [-4.04, -2.02]$, and $C \in [12, 19]$
 C. $A \in [0.33, 2.33]$, $B \in [-2.03, 0.5]$, and $C \in [4, 6]$
 D. $A \in [3, 10]$, $B \in [-4.04, -2.02]$, and $C \in [12, 19]$
 E. $A \in [0.33, 2.33]$, $B \in [0.82, 1.89]$, and $C \in [-8, 1]$

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

$$\frac{-6x + 5}{7} - \frac{-6x - 5}{6} = \frac{3x + 9}{2}$$

- A. $x \in [0.4, 1.2]$
 B. $x \in [-3.9, -2.3]$
 C. $x \in [-1.4, -0.5]$
 D. $x \in [-2.3, -1.6]$
 E. There are no real solutions.

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 .

$$(4, -11) \text{ and } (5, -3)$$

- A. $m \in [5, 9]$ $b \in [43, 44]$

B. $m \in [-8, -5]$ $b \in [37, 42]$

C. $m \in [5, 9]$ $b \in [-9, -7]$

D. $m \in [5, 9]$ $b \in [-15, -11]$

E. $m \in [5, 9]$ $b \in [-45, -41]$

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6. 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 .

$(5, 4)$ and $(-10, 6)$

A. $m \in [-0.46, 0.01]$ $b \in [-1.6, -0.7]$

B. $m \in [-0.46, 0.01]$ $b \in [14.7, 17.3]$

C. $m \in [-0.02, 0.62]$ $b \in [5, 10.6]$

D. $m \in [-0.46, 0.01]$ $b \in [-6.1, -1.3]$

E. $m \in [-0.46, 0.01]$ $b \in [2, 6.2]$

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7. 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 $3x - 8y = 10$ and passing through the point $(9, -9)$.

A. $m \in [-3.3, -1.7]$ $b \in [-23, -16]$

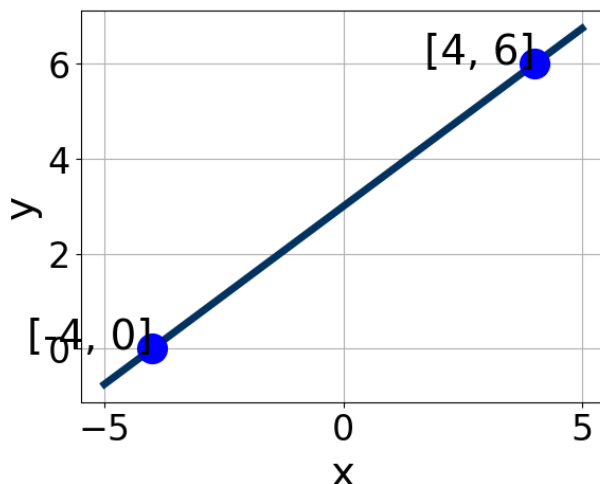
B. $m \in [-3.3, -1.7]$ $b \in [12, 21]$

C. $m \in [0.5, 4.3]$ $b \in [-33, -32]$

D. $m \in [-1.4, 2.5]$ $b \in [12, 21]$

E. $m \in [-3.3, -1.7]$ $b \in [-16, -12]$

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8. 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. $A \in [3, 5]$, $B \in [2.03, 4.19]$, and $C \in [5, 17]$
- B. $A \in [-5, -1]$, $B \in [2.03, 4.19]$, and $C \in [5, 17]$
- C. $A \in [-0.75, 0.25]$, $B \in [0.33, 3.14]$, and $C \in [2, 8]$
- D. $A \in [-0.75, 0.25]$, $B \in [-1.05, -0.45]$, and $C \in [-3, -1]$
- E. $A \in [3, 5]$, $B \in [-5.68, -3.67]$, and $C \in [-16, -8]$

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

$$-7(-19x + 8) = -9(10x + 17)$$

- A. $x \in [0.38, 1.04]$
- B. $x \in [-1.43, -0.44]$
- C. $x \in [-0.57, 0.08]$
- D. $x \in [4.67, 5.95]$
- E. There are no real solutions.

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

$$-14(18x - 2) = -12(-5x - 13)$$

- A. $x \in [0.84, 1.05]$

- B. $x \in [-0.54, -0.31]$
 - C. $x \in [-0.6, -0.54]$
 - D. $x \in [0.47, 0.68]$
 - E. There are no real solutions.
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