

1. 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, 11) and (2, 7)

- A.  $m \in [0.4, 3.9]$   $b \in [-6.93, -5.19]$
  - B.  $m \in [0.4, 3.9]$   $b \in [4.54, 5.31]$
  - C.  $m \in [0.4, 3.9]$   $b \in [0.45, 3.86]$
  - D.  $m \in [-2.6, -0.2]$   $b \in [7.47, 10.38]$
  - E.  $m \in [0.4, 3.9]$   $b \in [5.09, 6.45]$
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2. Find the equation of the line described below. Write the linear equation as  $y = mx + b$  and choose the intervals that contain  $m$  and  $b$ .

Parallel to  $5x + 3y = 9$  and passing through the point  $(-5, -6)$ .

- A.  $m \in [-3.7, -1.3]$   $b \in [-18.33, -13.33]$
  - B.  $m \in [0.6, 2.5]$   $b \in [1.33, 8.33]$
  - C.  $m \in [-1.6, 0.8]$   $b \in [-18.33, -13.33]$
  - D.  $m \in [-3.7, -1.3]$   $b \in [-3, 0]$
  - E.  $m \in [-3.7, -1.3]$   $b \in [11.33, 16.33]$
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3. 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  $7x + 9y = 8$  and passing through the point  $(-3, -5)$ .

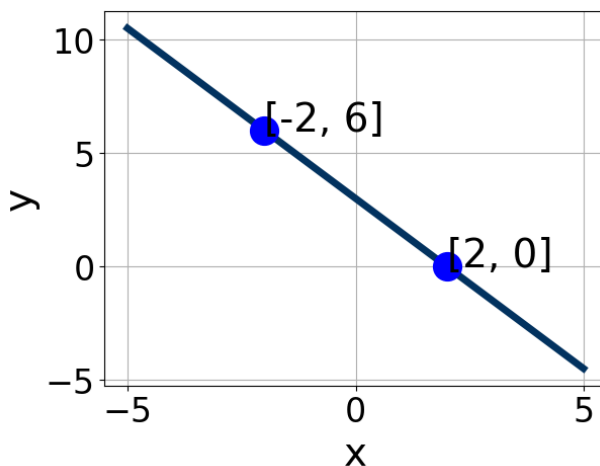
- A.  $m \in [1.12, 1.68]$   $b \in [-2.5, -1.45]$
- B.  $m \in [0.75, 1.05]$   $b \in [-1.93, -0.4]$
- C.  $m \in [-1.6, -0.69]$   $b \in [-9.91, -8.29]$
- D.  $m \in [1.12, 1.68]$   $b \in [0.62, 2.3]$
- E.  $m \in [1.12, 1.68]$   $b \in [-1.93, -0.4]$

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  $b$ .

$(-5, -11)$  and  $(9, 6)$

- A.  $m \in [0.21, 7.21]$   $b \in [-4.17, -2.94]$   
B.  $m \in [0.21, 7.21]$   $b \in [-5.13, -4.16]$   
C.  $m \in [0.21, 7.21]$   $b \in [3.37, 5.08]$   
D.  $m \in [0.21, 7.21]$   $b \in [-7.23, -5.22]$   
E.  $m \in [-3.21, -0.21]$   $b \in [16.45, 17.98]$

5. 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.  $A \in [1.9, 4.5]$ ,  $B \in [1.56, 2.01]$ , and  $C \in [5.2, 7.3]$   
B.  $A \in [1.1, 2.3]$ ,  $B \in [-1.32, -0.27]$ , and  $C \in [-3.2, -1.7]$   
C.  $A \in [1.9, 4.5]$ ,  $B \in [-2.06, -1.79]$ , and  $C \in [-6.8, -4.4]$   
D.  $A \in [1.1, 2.3]$ ,  $B \in [0.77, 1.29]$ , and  $C \in [0.2, 4.5]$   
E.  $A \in [-3.5, -2.2]$ ,  $B \in [-2.06, -1.79]$ , and  $C \in [-6.8, -4.4]$

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

$$-19(-14x + 6) = -18(10x + 7)$$

- A.  $x \in [-0.63, -0.32]$
  - B.  $x \in [2.4, 2.82]$
  - C.  $x \in [-0.26, 0.19]$
  - D.  $x \in [0.03, 0.77]$
  - E. There are no real solutions.
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7. Solve the linear equation below. Then, choose the interval that contains the solution.

$$\frac{-3x + 6}{5} - \frac{-3x + 9}{4} = \frac{4x + 7}{7}$$

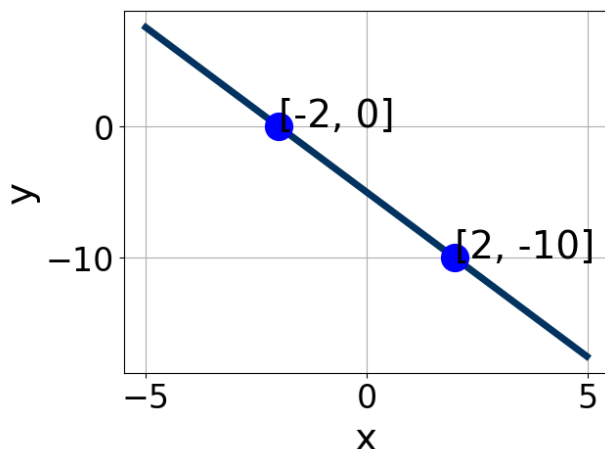
- A.  $x \in [-8.86, -1.86]$
  - B.  $x \in [-2.51, 3.49]$
  - C.  $x \in [-24.73, -20.73]$
  - D.  $x \in [5.81, 7.81]$
  - E. There are no real solutions.
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8. Solve the linear equation below. Then, choose the interval that contains the solution.

$$\frac{9x - 7}{5} - \frac{-7x - 4}{8} = \frac{7x + 7}{3}$$

- A.  $x \in [25.27, 30.27]$
  - B.  $x \in [-1.64, 4.36]$
  - C.  $x \in [12.39, 13.39]$
  - D.  $x \in [9.46, 11.46]$
  - E. There are no real solutions.
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9. 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.  $A \in [3, 11]$ ,  $B \in [1.78, 3.49]$ , and  $C \in [-10.6, -8.3]$   
B.  $A \in [-6, 2]$ ,  $B \in [-2.02, -1.55]$ , and  $C \in [9.8, 11.3]$   
C.  $A \in [3, 11]$ ,  $B \in [-2.02, -1.55]$ , and  $C \in [9.8, 11.3]$   
D.  $A \in [2.5, 3.5]$ ,  $B \in [0.86, 1.02]$ , and  $C \in [-6.5, -4.5]$   
E.  $A \in [2.5, 3.5]$ ,  $B \in [-1.42, 0.16]$ , and  $C \in [3.7, 5.6]$

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

$$-13(-19x + 11) = -5(-7x - 12)$$

- A.  $x \in [0.95, 1.06]$   
B.  $x \in [0.23, 0.39]$   
C.  $x \in [-0.45, -0.28]$   
D.  $x \in [0.3, 0.6]$   
E. There are no real solutions.
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