

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  $b$ .

Parallel to  $8x + 7y = 4$  and passing through the point  $(-10, -10)$ .

- A.  $m \in [-2.13, -0.99]$   $b \in [21.37, 22.44]$
  - B.  $m \in [-1.04, 0.25]$   $b \in [-21.6, -19.86]$
  - C.  $m \in [0.9, 1.41]$   $b \in [0.01, 1.59]$
  - D.  $m \in [-2.13, -0.99]$   $b \in [-1.13, 1.27]$
  - E.  $m \in [-2.13, -0.99]$   $b \in [-21.6, -19.86]$
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2. Solve the equation below. Then, choose the interval that contains the solution.

$$-9(-6x - 5) = -8(14x + 13)$$

- A.  $x \in [-1.28, -0.99]$
  - B.  $x \in [-0.9, -0.79]$
  - C.  $x \in [-0.52, -0.32]$
  - D.  $x \in [0.28, 0.47]$
  - E. There are no real solutions.
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3. Solve the equation below. Then, choose the interval that contains the solution.

$$-4(11x - 19) = -2(12x - 10)$$

- A.  $x \in [-6.8, -1.8]$
  - B.  $x \in [3.8, 6.8]$
  - C.  $x \in [-2.59, 2.41]$
  - D.  $x \in [1.8, 3.8]$
  - E. There are no real solutions.
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4. Solve the linear equation below. Then, choose the interval that contains the solution.

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

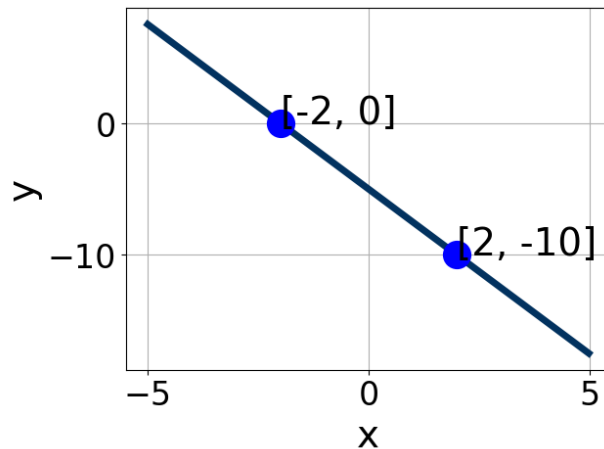
- A.  $x \in [720, 721]$
  - B.  $x \in [21, 23]$
  - C.  $x \in [140, 142]$
  - D.  $x \in [-4.78, 1.22]$
  - E. There are no real solutions.
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5. First, find the equation of the line containing the two points below. Then, write the equation as  $y = mx + b$  and choose the intervals that contain  $m$  and  $b$ .

$$(-11, -4) \text{ and } (-6, -10)$$

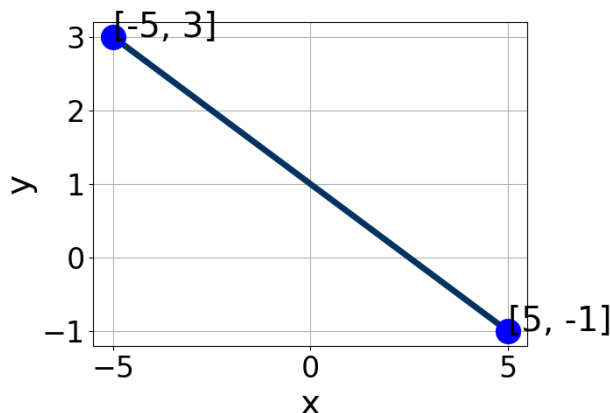
- A.  $m \in [1.2, 2.2]$   $b \in [-3.1, -2.1]$
  - B.  $m \in [-4.2, -0.2]$   $b \in [-7.2, -3.8]$
  - C.  $m \in [-4.2, -0.2]$   $b \in [6.3, 10.3]$
  - D.  $m \in [-4.2, -0.2]$   $b \in [16.5, 21.3]$
  - E.  $m \in [-4.2, -0.2]$   $b \in [-18.1, -16.1]$
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6. 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.  $A \in [1.2, 4.7]$ ,  $B \in [-1.7, -0.31]$ , and  $C \in [3, 6]$
- B.  $A \in [-8, -4.2]$ ,  $B \in [-2.07, -1.25]$ , and  $C \in [7, 13]$
- C.  $A \in [1.2, 4.7]$ ,  $B \in [0.3, 1.2]$ , and  $C \in [-8, 0]$
- D.  $A \in [2.9, 5.4]$ ,  $B \in [1.53, 2.46]$ , and  $C \in [-11, -9]$
- E.  $A \in [2.9, 5.4]$ ,  $B \in [-2.07, -1.25]$ , and  $C \in [7, 13]$

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.  $A \in [-3.2, -1.62]$ ,  $B \in [-6.4, -3]$ , and  $C \in [-5.2, -3.1]$
- B.  $A \in [1.66, 2.77]$ ,  $B \in [-6.4, -3]$ , and  $C \in [-5.2, -3.1]$
- C.  $A \in [1.66, 2.77]$ ,  $B \in [3.1, 6.8]$ , and  $C \in [3.7, 8.7]$
- D.  $A \in [-1.47, 0.43]$ ,  $B \in [0.9, 1.2]$ , and  $C \in [-0.1, 1.4]$

E.  $A \in [-1.47, 0.43]$ ,  $B \in [-1.1, -0.9]$ , and  $C \in [-1.3, 0.2]$

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  $b$ .

$(4, 10)$  and  $(-9, 2)$

- A.  $m \in [0.43, 1.79]$   $b \in [3, 7]$   
 B.  $m \in [0.43, 1.79]$   $b \in [6.54, 9.54]$   
 C.  $m \in [0.43, 1.79]$   $b \in [10, 20]$   
 D.  $m \in [0.43, 1.79]$   $b \in [-11.54, -6.54]$   
 E.  $m \in [-2.34, 0.24]$   $b \in [-3.54, 3.46]$

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  $b$ .

Parallel to  $3x + 8y = 8$  and passing through the point  $(3, -2)$ .

- A.  $m \in [-3.19, -2.38]$   $b \in [-2.1, 0.5]$   
 B.  $m \in [-0.22, 0.95]$   $b \in [-4.4, -1.1]$   
 C.  $m \in [-1.02, -0.27]$   $b \in [-2.1, 0.5]$   
 D.  $m \in [-1.02, -0.27]$   $b \in [-0.2, 1.5]$   
 E.  $m \in [-1.02, -0.27]$   $b \in [-6.1, -4.8]$

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

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

- A.  $x \in [27, 32]$   
 B.  $x \in [-9.89, -7.89]$   
 C.  $x \in [-4.39, -0.39]$

D.  $x \in [-0.95, 1.05]$

E. There are no real solutions.

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