

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  $9x - 5y = 14$  and passing through the point  $(-2, -4)$ .

- A.  $m \in [1.4, 2.1]$   $b \in [-2.97, -1.69]$
  - B.  $m \in [-2.9, -0.8]$   $b \in [-8.65, -6.65]$
  - C.  $m \in [0.3, 1.1]$   $b \in [-0.69, 0.25]$
  - D.  $m \in [1.4, 2.1]$   $b \in [-0.69, 0.25]$
  - E.  $m \in [1.4, 2.1]$   $b \in [0.17, 1.08]$
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2. 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  $(8, 5)$

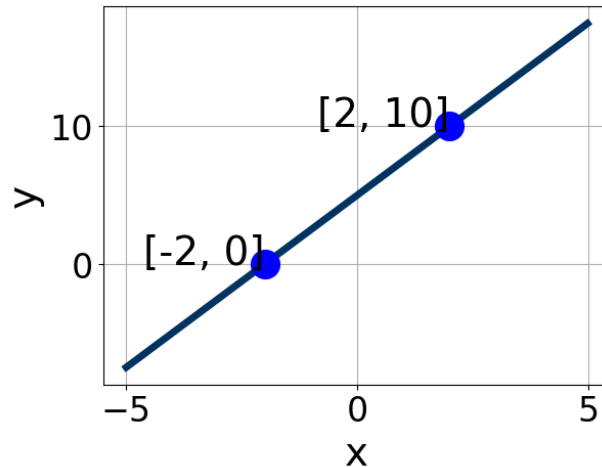
- A.  $m \in [0.75, 7.75]$   $b \in [-5, 3]$
  - B.  $m \in [0.75, 7.75]$   $b \in [19, 31]$
  - C.  $m \in [-3.75, -2.75]$   $b \in [34, 36]$
  - D.  $m \in [0.75, 7.75]$   $b \in [-26, -21]$
  - E.  $m \in [0.75, 7.75]$   $b \in [-15, -13]$
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3. Find the equation of the line described below. Write the linear equation as  $y = mx + b$  and choose the intervals that contain  $m$  and  $b$ .

Parallel to  $3x + 5y = 15$  and passing through the point  $(10, 3)$ .

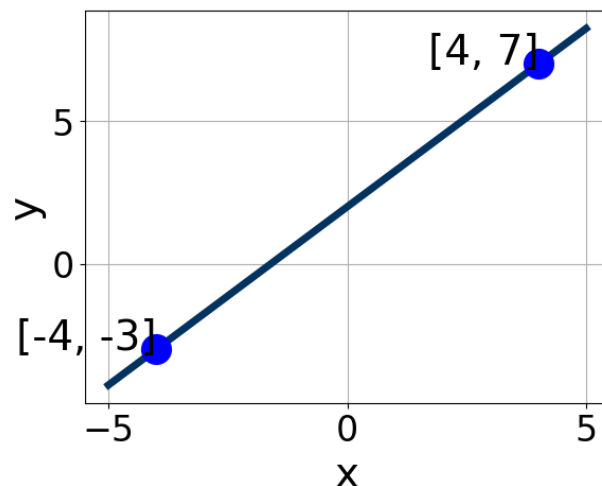
- A.  $m \in [-0.91, -0.12]$   $b \in [-8.7, -6.3]$
- B.  $m \in [-0.91, -0.12]$   $b \in [-11.6, -8.1]$
- C.  $m \in [-0.91, -0.12]$   $b \in [8.8, 9.2]$
- D.  $m \in [-1.72, -0.61]$   $b \in [8.8, 9.2]$
- E.  $m \in [0.26, 1.97]$   $b \in [-3.4, -2.1]$

4. 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.  $A \in [-5.1, -4.2]$ ,  $B \in [1.65, 2.49]$ , and  $C \in [10, 12]$   
B.  $A \in [3.9, 7.3]$ ,  $B \in [1.65, 2.49]$ , and  $C \in [10, 12]$   
C.  $A \in [-3.1, -0.2]$ ,  $B \in [0.93, 1.23]$ , and  $C \in [1, 6]$   
D.  $A \in [3.9, 7.3]$ ,  $B \in [-2.14, -1.8]$ , and  $C \in [-11, -6]$   
E.  $A \in [-3.1, -0.2]$ ,  $B \in [-1.38, -0.9]$ , and  $C \in [-8, -3]$

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.  $A \in [-1.25, 0.75]$ ,  $B \in [-3.9, -0.6]$ , and  $C \in [-3, 1]$
  - B.  $A \in [-1.25, 0.75]$ ,  $B \in [0, 3.3]$ , and  $C \in [1, 6]$
  - C.  $A \in [3, 7]$ ,  $B \in [-5.5, -3]$ , and  $C \in [-14, -7]$
  - D.  $A \in [-13, -4]$ ,  $B \in [1.5, 6.4]$ , and  $C \in [4, 13]$
  - E.  $A \in [3, 7]$ ,  $B \in [1.5, 6.4]$ , and  $C \in [4, 13]$
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6. Solve the equation below. Then, choose the interval that contains the solution.

$$-8(18x - 11) = -2(-10x + 15)$$

- A.  $x \in [0.43, 0.57]$
  - B.  $x \in [0.69, 0.81]$
  - C.  $x \in [-0.44, -0.24]$
  - D.  $x \in [0.33, 0.45]$
  - E. There are no real solutions.
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7. Solve the linear equation below. Then, choose the interval that contains the solution.

$$\frac{5x - 3}{8} - \frac{7x + 9}{2} = \frac{-9x + 8}{4}$$

- A.  $x \in [0.3, 1]$
  - B.  $x \in [-11.4, -10]$
  - C.  $x \in [-33.1, -30.2]$
  - D.  $x \in [2.4, 4.3]$
  - E. There are no real solutions.
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8. Solve the equation below. Then, choose the interval that contains the solution.

$$-12(19x + 17) = -16(-11x - 4)$$

- A.  $x \in [-0.76, -0.4]$
  - B.  $x \in [-0.32, 0.56]$
  - C.  $x \in [-2.89, -1.82]$
  - D.  $x \in [-0.47, -0.29]$
  - E. There are no real solutions.
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9. Solve the linear equation below. Then, choose the interval that contains the solution.

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

- A.  $x \in [-30, -26]$
  - B.  $x \in [-2.4, 4.6]$
  - C.  $x \in [108, 110]$
  - D.  $x \in [29, 32]$
  - E. There are no real solutions.
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10. 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  $b$ .

$$(-3, 4) \text{ and } (4, -8)$$

- A.  $m \in [-3, -0.6]$   $b \in [0.6, 4.3]$
  - B.  $m \in [-3, -0.6]$   $b \in [-1.7, 1]$
  - C.  $m \in [-3, -0.6]$   $b \in [-13.3, -9.7]$
  - D.  $m \in [-3, -0.6]$   $b \in [6.2, 8.9]$
  - E.  $m \in [0, 3.2]$   $b \in [-15.1, -14.8]$
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