

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  $b$ .

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

- A.  $m \in [0.01, 0.09]$   $b \in [9.3, 11.3]$
  - B.  $m \in [0.01, 0.09]$   $b \in [-10.7, -8.2]$
  - C.  $m \in [0.01, 0.09]$   $b \in [-0.4, 1.2]$
  - D.  $m \in [-0.08, -0.04]$   $b \in [-12.3, -11.3]$
  - E.  $m \in [0.01, 0.09]$   $b \in [-16.9, -13.4]$
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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  $b$ .

Perpendicular to  $9x + 4y = 15$  and passing through the point  $(-7, -6)$ .

- A.  $m \in [0.04, 0.75]$   $b \in [2.2, 3.6]$
  - B.  $m \in [1.16, 3.19]$   $b \in [-5.8, -2]$
  - C.  $m \in [0.04, 0.75]$   $b \in [-5.8, -2]$
  - D.  $m \in [0.04, 0.75]$   $b \in [-0.1, 1.4]$
  - E.  $m \in [-1.3, -0.24]$   $b \in [-9.4, -7.9]$
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3. Solve the equation below. Then, choose the interval that contains the solution.

$$-10(-17x + 14) = -15(3x + 4)$$

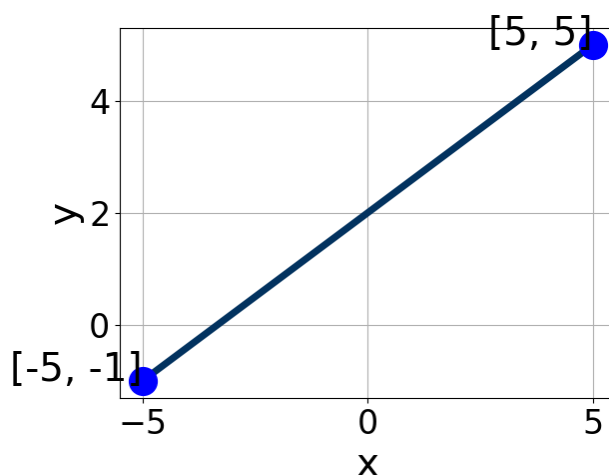
- A.  $x \in [-1.1, -0.78]$
- B.  $x \in [1.39, 1.75]$
- C.  $x \in [0.9, 0.98]$
- D.  $x \in [-0.69, 0.73]$
- E. There are no real solutions.

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

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

- A.  $x \in [-2, -1.7]$
- B.  $x \in [1.1, 4.2]$
- C.  $x \in [6.6, 8.1]$
- D.  $x \in [0, 1.5]$
- E. There are no real solutions.

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  $C$ .



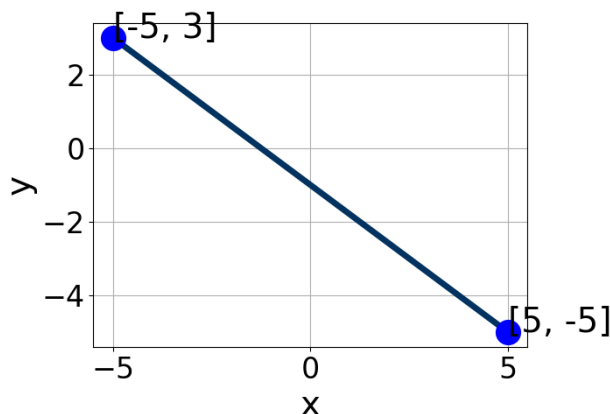
- A.  $A \in [-2.3, 0.7]$ ,  $B \in [-0.5, 2.9]$ , and  $C \in [0, 5]$
- B.  $A \in [-4.6, -2.3]$ ,  $B \in [1.8, 5.8]$ , and  $C \in [8, 14]$
- C.  $A \in [-2.3, 0.7]$ ,  $B \in [-1.9, -0.3]$ , and  $C \in [-7, 1]$
- D.  $A \in [0.3, 4.3]$ ,  $B \in [1.8, 5.8]$ , and  $C \in [8, 14]$
- E.  $A \in [0.3, 4.3]$ ,  $B \in [-7.6, -1.1]$ , and  $C \in [-11, -8]$

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

$$\frac{4x - 3}{5} - \frac{-8x + 8}{7} = \frac{6x + 4}{3}$$

- A.  $x \in [-54.83, -50.83]$   
B.  $x \in [-1.49, 2.51]$   
C.  $x \in [-15.83, -12.83]$   
D.  $x \in [-262.5, -261.5]$   
E. There are no real solutions.
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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.  $A \in [2.3, 6.9]$ ,  $B \in [-6.2, -1.2]$ , and  $C \in [4.97, 6.08]$   
B.  $A \in [-6.6, -3.6]$ ,  $B \in [-6.2, -1.2]$ , and  $C \in [4.97, 6.08]$   
C.  $A \in [0.3, 1]$ ,  $B \in [-1.8, 0.6]$ , and  $C \in [0.65, 1.54]$   
D.  $A \in [2.3, 6.9]$ ,  $B \in [4.1, 6.2]$ , and  $C \in [-6.72, -4.12]$   
E.  $A \in [0.3, 1]$ ,  $B \in [0.8, 1.6]$ , and  $C \in [-1.16, -0.54]$
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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  $b$ .

$$(-5, -9) \text{ and } (-8, -6)$$

- A.  $m \in [-2.7, 0.9]$   $b \in [12, 17]$
  - B.  $m \in [-2.7, 0.9]$   $b \in [-7, 0]$
  - C.  $m \in [-2.7, 0.9]$   $b \in [-17, -11]$
  - D.  $m \in [-0.7, 1.9]$   $b \in [1, 6]$
  - E.  $m \in [-2.7, 0.9]$   $b \in [1, 6]$
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9. Solve the equation below. Then, choose the interval that contains the solution.

$$-2(-9x - 5) = -12(-18x - 8)$$

- A.  $x \in [0.52, 0.59]$
  - B.  $x \in [-0.56, -0.48]$
  - C.  $x \in [-0.46, -0.45]$
  - D.  $x \in [-0.44, -0.37]$
  - E. There are no real solutions.
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10. 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  $8x - 5y = 6$  and passing through the point  $(-3, 7)$ .

- A.  $m \in [-1.01, 0.54]$   $b \in [-5.42, -4.85]$
  - B.  $m \in [-0.36, 1.13]$   $b \in [8.87, 9.3]$
  - C.  $m \in [-1.01, 0.54]$   $b \in [9.52, 10.75]$
  - D.  $m \in [-1.01, 0.54]$   $b \in [4.1, 5.25]$
  - E.  $m \in [-1.89, -1.08]$   $b \in [4.1, 5.25]$
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