

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

$$-5(18x + 11) = -15(-14x - 7)$$

- A.  $x \in [-1.07, -0.43]$
  - B.  $x \in [0.11, 0.19]$
  - C.  $x \in [-0.52, -0.21]$
  - D.  $x \in [-0.23, 0.05]$
  - E. There are no real solutions.
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2. Solve the linear equation below. Then, choose the interval that contains the solution.

$$\frac{-5x - 6}{8} - \frac{5x - 3}{3} = \frac{-9x - 7}{5}$$

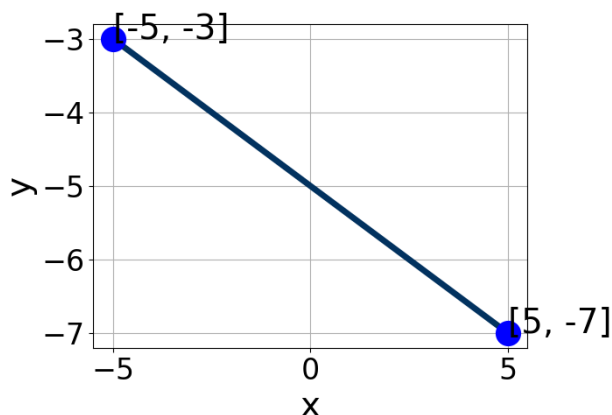
- A.  $x \in [2, 4.4]$
  - B.  $x \in [0.1, 3.1]$
  - C.  $x \in [-1.6, 0.4]$
  - D.  $x \in [7.2, 9.2]$
  - E. There are no real solutions.
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3. Solve the equation below. Then, choose the interval that contains the solution.

$$-11(15x - 9) = -2(-5x + 18)$$

- A.  $x \in [0.38, 0.42]$
  - B.  $x \in [-0.39, -0.31]$
  - C.  $x \in [0.28, 0.4]$
  - D.  $x \in [0.71, 0.84]$
  - E. There are no real solutions.
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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.  $A \in [-0.13, 1.46]$ ,  $B \in [0.9, 3.2]$ , and  $C \in [-5, -4]$   
 B.  $A \in [1, 3.62]$ ,  $B \in [3.5, 5.4]$ , and  $C \in [-31, -23]$   
 C.  $A \in [1, 3.62]$ ,  $B \in [-7.8, -1.5]$ , and  $C \in [23, 27]$   
 D.  $A \in [-3.6, -1.74]$ ,  $B \in [-7.8, -1.5]$ , and  $C \in [23, 27]$   
 E.  $A \in [-0.13, 1.46]$ ,  $B \in [-4.7, 0.5]$ , and  $C \in [5, 11]$

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

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

- A.  $x \in [1.3, 2.9]$   
 B.  $x \in [0.1, 1.1]$   
 C.  $x \in [28.5, 30.9]$   
 D.  $x \in [6.8, 7.5]$   
 E. There are no real solutions.

6. 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  $7x + 5y = 14$  and passing through the point  $(-2, -5)$ .

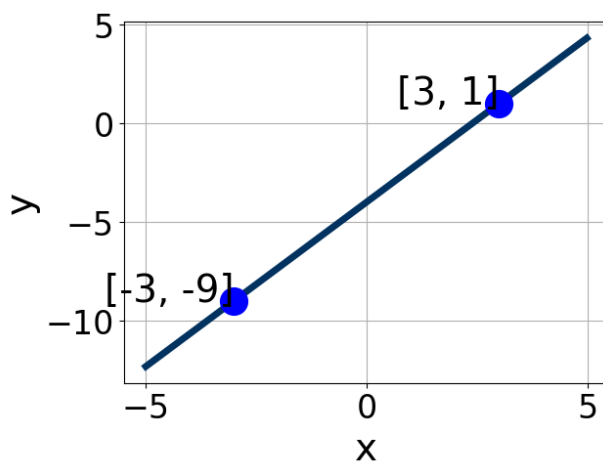
- A.  $m \in [0.71, 0.74]$   $b \in [-3.55, -2.81]$
- B.  $m \in [0.71, 0.74]$   $b \in [-4.18, -3.37]$
- C.  $m \in [0.71, 0.74]$   $b \in [3.33, 3.91]$
- D.  $m \in [0.93, 1.67]$   $b \in [-4.18, -3.37]$
- E.  $m \in [-1.51, -0.24]$   $b \in [-6.55, -6.13]$

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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  $b$ .

Parallel to  $3x + 5y = 13$  and passing through the point  $(-5, -10)$ .

- A.  $m \in [-1.23, 0.45]$   $b \in [-6.3, -3.9]$
- B.  $m \in [-1.23, 0.45]$   $b \in [-13.4, -10.5]$
- C.  $m \in [-1.23, 0.45]$   $b \in [11.9, 13.2]$
- D.  $m \in [-2.34, -0.92]$   $b \in [-13.4, -10.5]$
- E.  $m \in [-0.37, 1.46]$   $b \in [-8, -6.3]$

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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.  $A \in [-4.8, 1.4]$ ,  $B \in [0.46, 2.5]$ , and  $C \in [-4, -1]$
- B.  $A \in [-5.9, -4.3]$ ,  $B \in [2.76, 3.35]$ , and  $C \in [-13, -6]$

- C.  $A \in [-4.8, 1.4]$ ,  $B \in [-1.06, -0.45]$ , and  $C \in [4, 10]$   
D.  $A \in [3.7, 6.9]$ ,  $B \in [2.76, 3.35]$ , and  $C \in [-13, -6]$   
E.  $A \in [3.7, 6.9]$ ,  $B \in [-4.12, -2.96]$ , and  $C \in [9, 13]$
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9. 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  $b$ .

$(10, 5)$  and  $(5, 9)$

- A.  $m \in [-2.5, 0.7]$   $b \in [12.6, 14.2]$   
B.  $m \in [-2.5, 0.7]$   $b \in [-6.3, -2.6]$   
C.  $m \in [-2.5, 0.7]$   $b \in [1.2, 4.2]$   
D.  $m \in [-0.1, 1.2]$   $b \in [4.9, 5.9]$   
E.  $m \in [-2.5, 0.7]$   $b \in [-13.4, -11]$
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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  $b$ .

$(-9, 4)$  and  $(3, 2)$

- A.  $m \in [-0.59, 0.03]$   $b \in [-2.99, -2.1]$   
B.  $m \in [-0.07, 0.29]$   $b \in [0.44, 1.9]$   
C.  $m \in [-0.59, 0.03]$   $b \in [12.53, 13.34]$   
D.  $m \in [-0.59, 0.03]$   $b \in [2.16, 2.59]$   
E.  $m \in [-0.59, 0.03]$   $b \in [-1.57, -0.15]$
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