6. 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.

$(-7, 5)$ and $(2, -9)$

$m = \boxed{\frac{-14}{9}}$ $\quad b = \boxed{\frac{-53}{9}}$

(A) $m \in [-4, 0]$ and $b \in [-6.4, -5.4]$

B. $m \in [-2, -1]$ and $b \in [5.1, 8.1]$

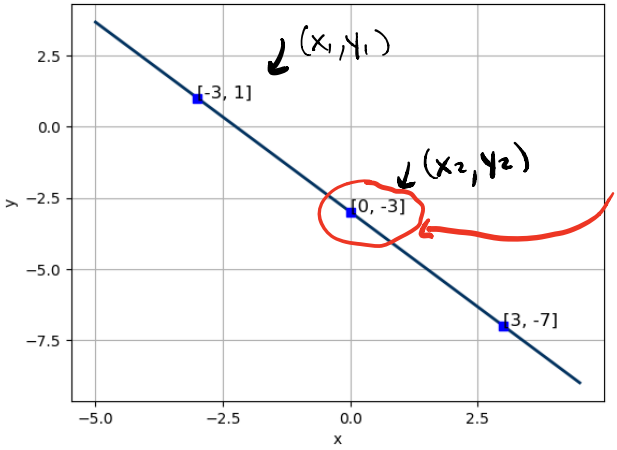
C. $m \in [-4, 1]$ and $b \in [11.7, 12.9]$

D. $m \in [-5, 0]$ and $b \in [-11.1, -10]$

E. $m \in [0, 3]$ and $b \in [-13.6, -11.4]$

---

7. Write the equation of the line in the graph below in the form $Ax + By = C$. Then, choose the intervals that contain $A, B,$ and C.



$A = \boxed{4}$ $\quad B = \boxed{3}$ $\quad C = \boxed{-9}$

A. $A \in [0.5, 0.84]$, $B \in [-1.01, -0.67]$, and $C \in [11.5, 12.4]$

B. $A \in [1, 1.42]$, $B \in [0.85, 1.58]$, and $C \in [-3.4, 0.4]$

C. $A \in [-4.07, -2.99]$, $B \in [-3.01, -2.67]$, and $C \in [5.3, 10.2]$

D. $A \in [2.53, 3.79]$, $B \in [-4.72, -3.85]$, and $C \in [11.5, 12.4]$

(E) $A \in [3.04, 4.03]$, $B \in [2.74, 3.5]$, and $C \in [-9.3, -8.7]$

8. 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 $8x - 5y = 13$ and passing through the point $(7, 3)$.

$m =$ $\frac{8}{5}$ $\quad b =$ $\frac{-41}{5}$

A. $m \in [1, 5]$ and $b \in [-1, 1]$

B. $m \in [1.5, 2.1]$ and $b \in [-9, -6]$

C. $m \in [-0.2, 1.1]$ and $b \in [-12, -5]$

D. $m \in [-2, -0.9]$ and $b \in [13, 18]$

E. $m \in [-1, 3]$ and $b \in [5, 11]$

$8x - 5y = 13$

$-8x \quad = -8x$

$-5y = -8x + 13$

$y = \frac{8}{5}x - \frac{13}{5}$

SLOPE IS $\frac{8}{5}$

★PARALLEL = SAME SLOPE!

SUBSTITUTE TO SOLVE FOR b!

$y = \frac{8}{5}x + b$

$3 = \frac{8}{5}(7) + b$

$3 = \frac{56}{5} + b$

$3 - \frac{56}{5} = b \Rightarrow \frac{15}{5} - \frac{56}{5} = b$

$-\frac{41}{5} = b$

$\Rightarrow y = \frac{8}{5}x - \frac{41}{5}$

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

$$-3(-4x - 10) = -9(-8x - 13)$$

$x =$ -1.45

A. $x \in [-1.29, -0.99]$

B. $x \in [-1.72, -1.35]$

C. $x \in [1.89, 2.58]$

D. $x \in [-1.77, -1.5]$

E. There are no Real solutions.

$-3(-4x) + (-3)(-10) = (-9)(-8x) + (-9)(-13)$

$12x + 30 = 72x + 117$

$-12x \quad = -12x$

$30 = 60x + 117$

$-117 = -117$

$\frac{-87}{60} = \frac{60x}{60} \Rightarrow \frac{-87}{60} = x$ OR $-1.45 = x$

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

$$\left(\frac{5x + 5}{5} - \frac{4x - 5}{2} = \frac{3x + 4}{3}\right)30$$

★COMMON DENOMINATOR IS $5 \cdot 2 \cdot 3 = 30$

$x =$ 1.083

A. $x \in [-4, 0]$

B. $x \in [2, 4]$

C. $x \in [0, 2]$

D. $x \in [0, 2]$

E. There are no Real solutions.

$6 \cdot 30\left(\frac{5x+5}{5}\right) - \frac{30}{15}\left(\frac{4x-5}{2}\right) = \frac{30}{10}\left(\frac{3x+4}{3}\right)$

$6(5x+5) - 15(4x-5) = 10(3x+4)$

$30x + 30 - 60x + 75 = 30x + 40$

$-30x + 105 = 30x + 40$

$105 = 60x + 40$

$65 = 60x$

$\frac{65}{60} = x$ OR $1.083 = x$