

Given $A(-3, 8)$ and $B(2, 12)$,

Determine Standard Form and Slope-y-intercept form
($y = mx + b$)

① Slope: $m = \frac{12-8}{2-(-3)} = \frac{4}{5}$

② Point-slope: $y - y_1 = m(x - x_1)$

$(y - 12) = \frac{4}{5}(x - 2)$

$5y - 60 = 4x - 8$

③ Standard: $0 = 4x - 5y + 52$

$y - 8 = \frac{4}{5}(x + 3)$

$5y - 40 = 4x + 12$

$0 = 4x - 5y + 52$

④ $y = mx + b$: $5y - 60 = 4x - 8$

$\frac{5y}{5} = \frac{4x}{5} + \frac{52}{5}$

$y = \frac{4}{5}x + \frac{52}{5}$

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Write the $y = \textcircled{1}mx + \textcircled{2}b$ and Standard form given:

27. $m = 2, b = 3$

① $y = 2x + 3$

② $0 = 2x - y + 3$

30. $m = -5, b = -7$

① $y = -5x - 7$

② $5x + y + 7 = 0$

$$32 \quad m = \frac{2}{3}, b = -2$$

$$\textcircled{1} \quad y = \frac{2}{3}x - 2$$

$$3 \left(0 = \frac{2}{3}x - y - 2 \right)$$

$$\textcircled{2} \quad 0 = 2x - 3y - 6$$

Graph

$$39. \quad y = 2x + 5$$

$$m = \frac{2}{1} \quad y\text{-int: } 5 \text{ or } (0, 5)$$

Step One: plot the y-int

Step two: from the y-int,
rise and run.
slope

$$41. \quad y = -x + 4$$

$$m = -\frac{1}{1} \quad y\text{-int} = 4 \quad (0, 4)$$

$$43. \quad y = -\frac{3}{4}x + 3$$

$$m = -\frac{3}{4} \quad y\text{-int} = 3 \quad (0, 3)$$

$$35. \quad \text{Horizontal, } A(0, 4)$$

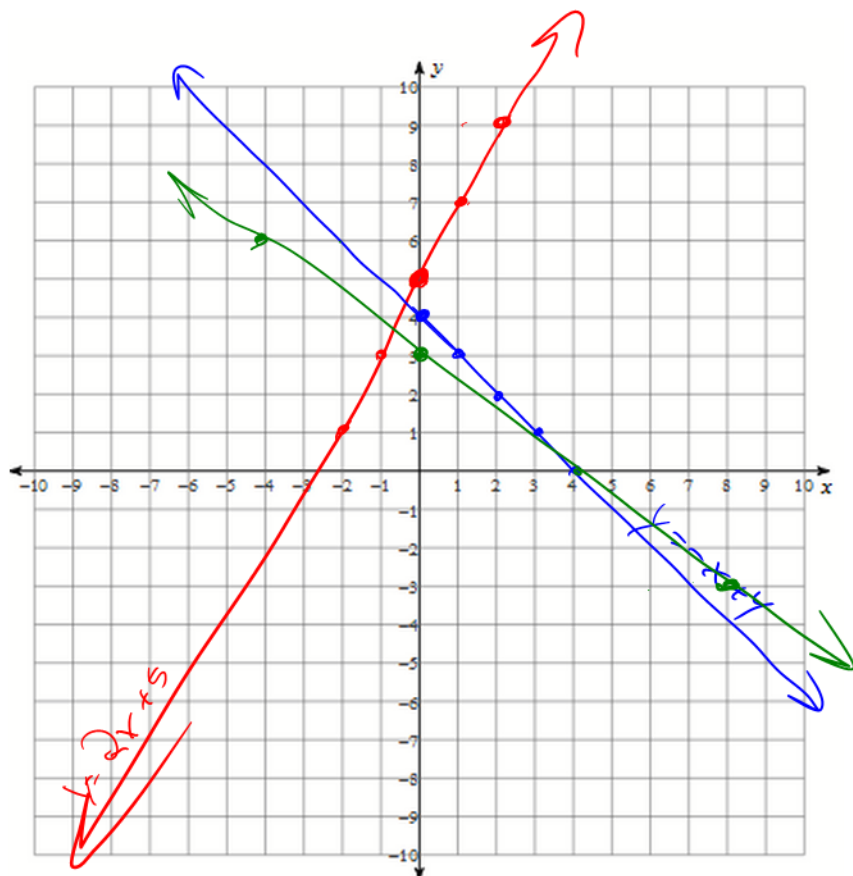
$$m = 0$$

$$\therefore y = 4$$

$$36. \quad \text{Vertical, } B(3, 0)$$

$$m = \text{undefined}$$

$$\therefore x = 3$$



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