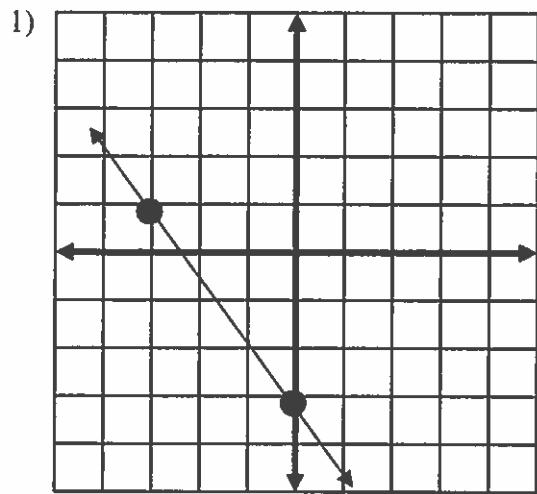
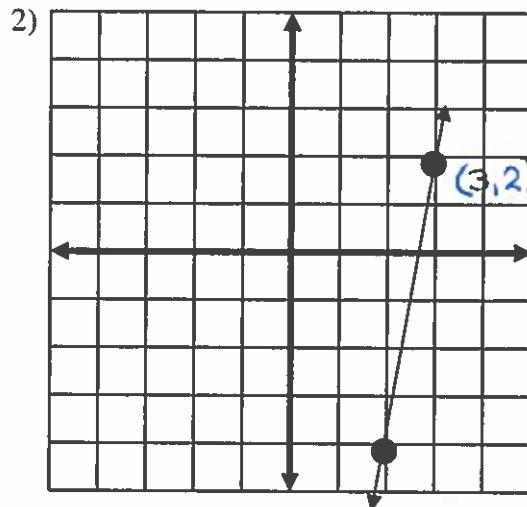


Write an equation in slope-intercept form for each graph.



$$y = -\frac{4}{3}x - 3$$



$$y = 6x - 16$$

$$\begin{aligned} y &= 6x + b \\ 2 &= 6(3) + b \\ 2 &= 18 + b \\ -16 &= b \end{aligned}$$

Write an equation in slope-intercept form for the line described.

- 3) slope 3, passes through (1, -3)

$$\begin{aligned} y &= 3x + b \\ -3 &= 3(1) + b \\ -3 &= 3 + b \\ -6 &= b \end{aligned}$$

$$y = 3x - 6$$

- 4) slope $-\frac{2}{3}$, passes through (6, -8)

$$\begin{aligned} y &= -\frac{2}{3}x + b \\ -8 &= -\frac{2}{3}(6) + b \\ -8 &= -4 + b \\ -4 &= b \end{aligned}$$

$$y = -\frac{2}{3}x - 4$$

- 5) passes through (-2, -4) & (1, 8)

$$\begin{aligned} m &= \frac{8 - (-4)}{1 - (-2)} & y &= 4x + b \\ &= \frac{12}{3} & 8 &= 4(1) + b \\ &= 4 & 8 &= 4 + b \\ & & 4 &= b \end{aligned}$$

$$y = 4x + 4$$

- 6) passes through (3, 11) & (-6, 5)

$$\begin{aligned} m &= \frac{5 - 11}{-6 - 3} & y &= \frac{2}{3}x + b \\ &= \frac{-6}{-9} & 11 &= \frac{2}{3}(3) + b \\ &= \frac{2}{3} & 11 &= 2 + b \\ & & 9 &= b \end{aligned}$$

$$y = \frac{2}{3}x + 9$$

- 7) x-intercept 2, y-intercept -6

A coordinate plane showing a line with a positive slope. The x-intercept is marked at (2, 0) and the y-intercept is marked at (0, -6). The line passes through these points and continues in both directions.

$$\begin{aligned} m &= \frac{6}{2} \\ m &= 3 \end{aligned}$$

$$y = 3x - 6$$

- 8) y-intercept 7, with no x-intercept

A coordinate plane showing a horizontal line at y = 7. The line is labeled "Horizontal" and has a slope of 0. The y-intercept is marked at (0, 7).

$$\begin{aligned} m &= 0 \\ y &= 0x + 7 \end{aligned}$$

$$y = 7$$

- 9) passes through $(-4, 2)$, parallel to the line whose equation is $y = \frac{1}{2}x + 5$.

$$m = \frac{1}{2}$$

$$y = \frac{1}{2}x + b$$

$$2 = \frac{1}{2}(-4) + b$$

$$2 = -2 + b$$

$$4 = b$$

$$\boxed{y = \frac{1}{2}x + 4}$$

- 10) passes through $(3, 1)$, perpendicular to the line whose equation is $y = -3x + 2$.

$$\perp m = \frac{1}{3}$$

$$y = \frac{1}{3}x + b$$

$$1 = \frac{1}{3}(3) + b$$

$$1 = 1 + b$$

$$\cancel{1 - 1} b = 0$$

$$\boxed{y = \frac{1}{3}x + 0}$$

- 11) passes through $(1, -1)$, parallel to the line that passes through $(4, 1)$ & $(2, -3)$.

$$\begin{aligned} m &= \frac{-3-1}{2-4} \\ &= \frac{-4}{-2} \\ &= 2 \end{aligned}$$

$$m = 2$$

$$\begin{aligned} y &= 2x + b \\ -1 &= 2(1) + b \\ -1 &= 2 + b \\ -3 &= b \end{aligned}$$

$$\boxed{y = 2x - 3}$$

- 12) passes through $(8, -6)$, perpendicular to the graph of $2x - y = 4$.

$$\begin{aligned} \perp m &= -\frac{1}{2} \\ y &= -\frac{1}{2}x + b \\ -6 &= -\frac{1}{2}(8) + b \\ -6 &= -4 + b \\ -2 &= b \end{aligned}$$

$$\begin{aligned} -y &= -2x + 4 \\ y &= 2x - 4 \end{aligned}$$

$$\boxed{y = -\frac{1}{2}x - 2}$$

- 13) passes through $(2, -2)$, perpendicular to the graph of $x + 5y = 6$.

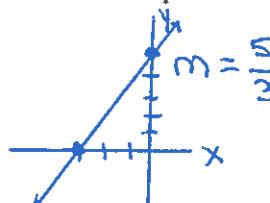
$$\begin{aligned} \perp m &= 5 \\ y &= 5x + b \\ -2 &= 5(2) + b \\ -2 &= 10 + b \\ -12 &= b \end{aligned}$$

$$\begin{aligned} 5y &= -x + 6 \\ y &= -\frac{x}{5} + \frac{6}{5} \\ m &= -\frac{1}{5} \end{aligned}$$

$$\boxed{y = 5x - 12}$$

- 14) passes through $(6, 1)$, parallel to the line with x-intercept -3 and y-intercept 5 .

$$\begin{aligned} m &= \frac{5}{3} \\ y &= \frac{5}{3}x + b \\ 1 &= \frac{5}{3}(-3) + b \\ 1 &= 10 + b \\ -9 &= b \end{aligned}$$



$$\boxed{y = \frac{5}{3}x - 9}$$