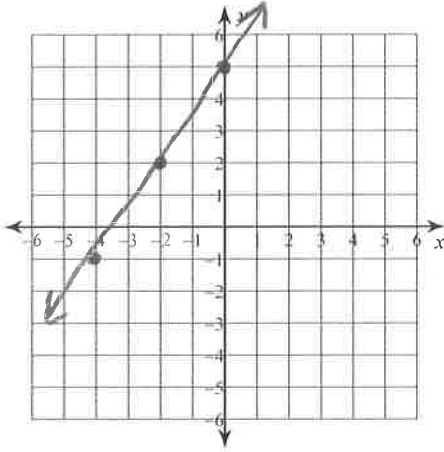


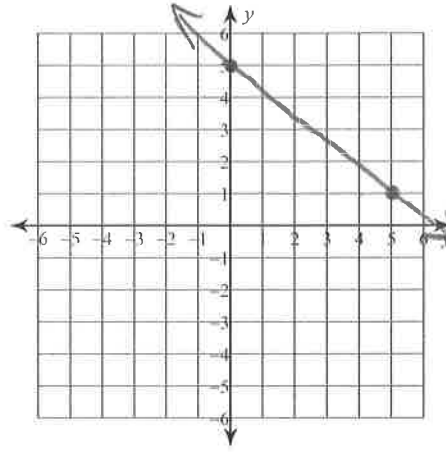
WS Linear Functions Review

Sketch the graph of each line.

1) $y = \frac{3}{2}x + 5$

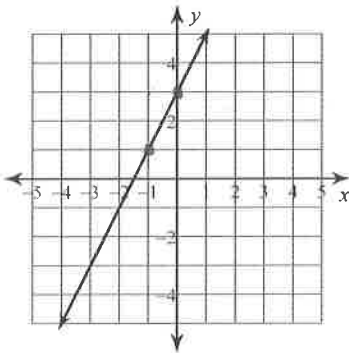


2) $y = -\frac{4}{5}x + 5$



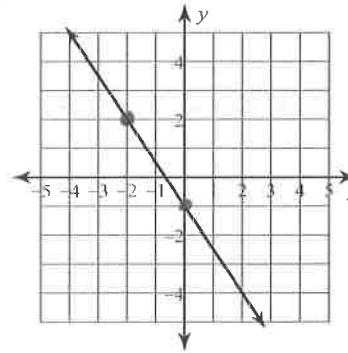
Write the slope-intercept form of the equation of each line.

3)



$$y = 2x + 3$$

4)



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

Write the slope-intercept form of the equation of the line through the given point with the given slope.

5) through: $(2, 2)$, slope $= \frac{1}{2}$

$$y = mx + b$$

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

$$\begin{array}{r} 2 = 1 + b \\ -1 \quad -1 \\ \hline 1 = b \end{array}$$

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

6) through: $(3, -3)$, slope $= -\frac{7}{3}$

$$y = mx + b$$

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

$$\begin{array}{r} -3 = -7 + b \\ +7 \quad +7 \\ \hline 4 = b \end{array}$$

$$y = -\frac{7}{3}x + 4$$

Write the slope-intercept form of the equation of the line through the given points.

7) through: $(-3, -1)$ and $(-4, 5)$

$$\begin{array}{c} x \quad y \\ -1 \left(\begin{array}{c|c} -3 & -1 \\ -4 & 5 \end{array} \right) + b \end{array}$$

$$y = mx + b$$

$$-1 = -6(-3) + b$$

$$-1 = 18 + b$$

$$\begin{array}{r} -18 \quad -18 \\ \hline -19 = b \end{array}$$

$$m = -6$$

$$y = -6x - 19$$

8) through: $(-5, -2)$ and $(0, -4)$

$$\begin{array}{c} x \quad y \\ +5 \left(\begin{array}{c|c} -5 & -2 \\ 0 & -4 \end{array} \right) - 2 \end{array}$$

$$y = mx + b$$

$$-4 = -\frac{2}{5}(0) + b$$

$$-4 = 0 + b$$

$$b = -4$$

$$m = -\frac{2}{5}$$

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

9) through: $(-3, -1)$ and $(-5, 5)$

$$\begin{array}{c} x \quad y \\ -2 \left(\begin{array}{c|c} -3 & -1 \\ -5 & 5 \end{array} \right) + b \end{array}$$

$$y = mx + b$$

$$-1 = -3(-3) + b$$

$$-1 = 9 + b$$

$$\begin{array}{r} -9 \quad -9 \\ \hline -10 = b \end{array}$$

$$m = \frac{6}{-2} = -3$$

$$y = -3x - 10$$

10) through: $(1, 3)$ and $(-2, 1)$

$$\begin{array}{c} x \quad y \\ -3 \left(\begin{array}{c|c} 1 & 3 \\ -2 & 1 \end{array} \right) - 2 \end{array}$$

$$y = mx + b$$

$$3 = \frac{2}{3}(1) + b$$

$$3 = \frac{2}{3} + b$$

$$\begin{array}{r} -\frac{2}{3} \quad -\frac{2}{3} \\ \hline \frac{7}{3} = b \end{array}$$

$$m = \frac{2}{3}$$

$$\begin{array}{r} 3 - \frac{2}{3} \\ \frac{9}{3} - \frac{2}{3} \end{array}$$

$$y = \frac{2}{3}x + \frac{7}{3}$$