

Write the equation of the line that has a slope of $-\frac{1}{3}$ and passes through $(4, -7)$.

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

$$x_1 = 4$$

$$y_1 = -7$$

$$y - y_1 = m(x - x_1)$$

$$y - (-7) = -\frac{1}{3}(x - 4)$$

$$y + 7 = -\frac{1}{3}(x - 4)$$

Write the equation of the line that has a slope of 5 and passes through $(-1, 5)$.

$$m = 5$$

$$x_1 = -1$$

$$y_1 = 5$$

$$y - y_1 = m(x - x_1)$$

$$y - 5 = 5(x - (-1))$$

$$y - 5 = 5(x + 1)$$

Write the equation of the line that passes through (1, 4) and (-2, 3).

$$\begin{array}{c|c} x & y \\ \hline 1 & 4 \\ -2 & 3 \end{array} \downarrow -1$$

$$m = \frac{\Delta y}{\Delta x} = \frac{-1}{-3} = \frac{1}{3}$$

$$m = 1/3$$

$$x_1 = 1$$

$$y_1 = 4$$

$$y - y_1 = m(x - x_1)$$

$$y - 4 = 1/3(x - 1)$$

Write the equation of the line that passes through (-2, 0) and (4, 1).

$$\begin{array}{c|c} x & y \\ \hline -2 & 0 \\ 4 & 1 \end{array} \downarrow +1 \quad \frac{\Delta y}{\Delta x} = \frac{1}{6}$$

$$m = 1/6$$

$$x_1 = -2$$

$$y_1 = 0$$

$$y - y_1 = m(x - x_1)$$

$$y - 0 = 1/6(x - (-2))$$

$$y = 1/6(x + 2)$$