

**Topic: Building Writing Equations – Given a point and Slope**

Write the equation give a point and the slope.

1. Point = (1, 2) and  $m = 7$

$$y = 7x - 5$$

$$\begin{aligned} 2 &= 7(1) + b \\ 2 &= 7 + b \\ b &= -5 \end{aligned}$$

2. Point = (3, -1) and  $m = -1$

$$y = -1x + 2$$

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

3. Point = (-2, 5) and  $m = \frac{-5}{2}$ .

$$y = \frac{-5}{2}x + 0$$

$$\begin{aligned} 5 &= \left(\frac{-5}{2}\right)(-2) + b \\ 5 &= +5 + b \\ b &= 0 \end{aligned}$$

4. Point = (6, 5) and  $m = \frac{5}{3}$

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

$$\begin{aligned} 5 &= \frac{5}{3}(6) + b \\ 5 &= 10 + b \\ b &= -5 \end{aligned}$$