

Exercise 67

For the following exercises, write the equation of the line satisfying the given conditions in slope-intercept form.

$$\text{Slope} = -6, \quad \text{passes through } (1, 3)$$

Solution

The line that passes through (x_0, y_0) with the slope m has the following equation.

$$y - y_0 = m(x - x_0)$$

This is the point-slope formula. Here the slope is $m = -6$, and the point is $(1, 3)$.

$$y - 3 = -6(x - 1)$$

$$y - 3 = -6x + 6$$

$$y = -6x + 9$$