Chapter 1

Functions and Graphs

Exercise Solution

Exercise 1.1.67

Instruction

Assuming a line with slope $= -6$, passing through the point $(1, 3)$. Write the equation for this line in slope-intercept form.

Solution

We have the slope and one point on the line, this enables to write the equation for the line in point-slope form, which in general is $y - y_1 = m(x - x_1)$. In this case we get

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

Then to get the slope-intercept form we simply solve the above equation for y,

$$y = -6(x - 1) + 3 = -6x + 6 + 3 = -6x + 9.$$

Answer

y = -6x + 9.