Exercise 13

In Exercises 7–16, sketch the graph of the equation by point plotting.

$$y = \sqrt{x} - 6$$

Solution

Evaluate y for several integer values of x.

$$x = 0: \quad y = \sqrt{0} - 6 = -6$$

$$x = 1: \quad y = \sqrt{1} - 6 = -5$$

$$x = 4: \quad y = \sqrt{4} - 6 = -4$$

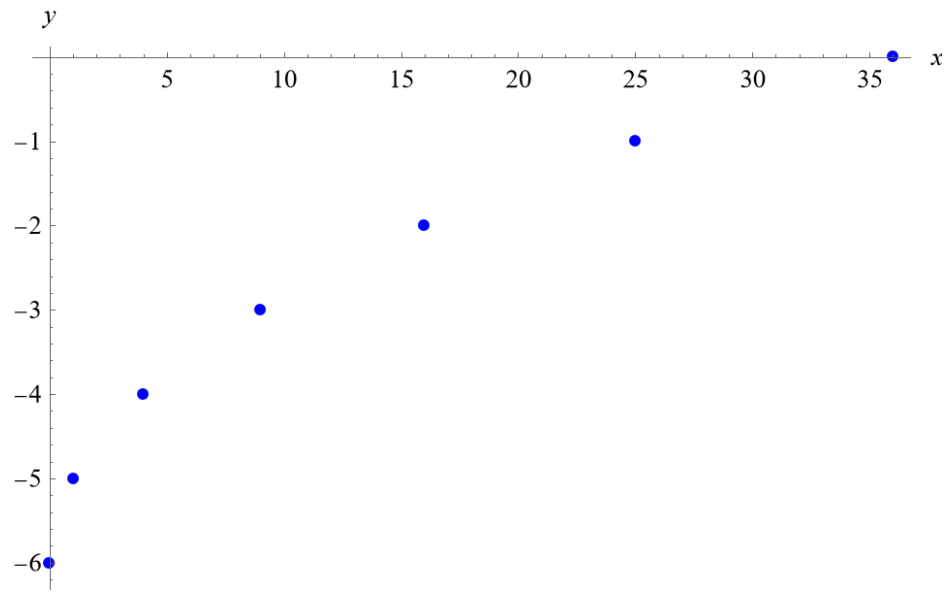
$$x = 9: \quad y = \sqrt{9} - 6 = -3$$

$$x = 16: \quad y = \sqrt{16} - 6 = -2$$

$$x = 25: \quad y = \sqrt{25} - 6 = -1$$

$$x = 36: \quad y = \sqrt{36} - 6 = 0$$

The points to plot are $(0, -6)$, $(1, -5)$, $(4, -4)$, $(9, -3)$, $(16, -2)$, $(25, -1)$, and $(36, 0)$.



Connect the dots to get the graph of $y = \sqrt{x} - 6$.