Exercise 14

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

$$y = \sqrt{x + 2}$$

Solution

Evaluate y for several integer values of x.

$$x = -2: \quad y = \sqrt{-2 + 2} = 0$$

$$x = -1: \quad y = \sqrt{-1 + 2} = 1$$

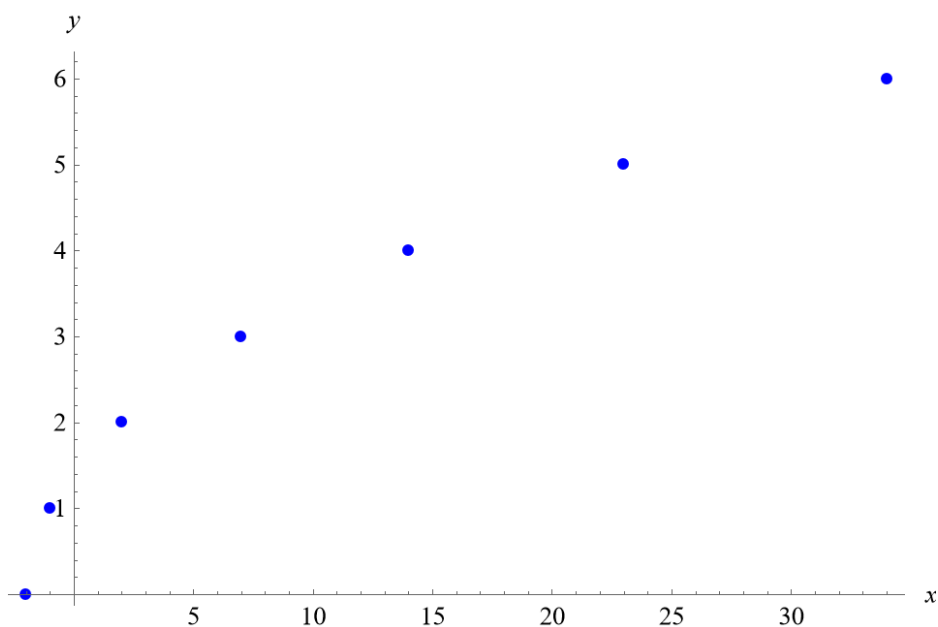$$x = 2: \quad y = \sqrt{2 + 2} = 2$$

$$x = 7: \quad y = \sqrt{7 + 2} = 3$$

$$x = 14: \quad y = \sqrt{14 + 2} = 4$$

$$x = 23: \quad y = \sqrt{23 + 2} = 5$$

$$x = 34: \quad y = \sqrt{34 + 2} = 6$$

The points to plot are $(-2, 0)$, $(-1, 1)$, $(2, 2)$, $(7, 3)$, $(14, 4)$, $(23, 5)$, and $(34, 6)$.

Connect the dots to get the graph of $y = \sqrt{x + 2}$.