Exercise 11

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

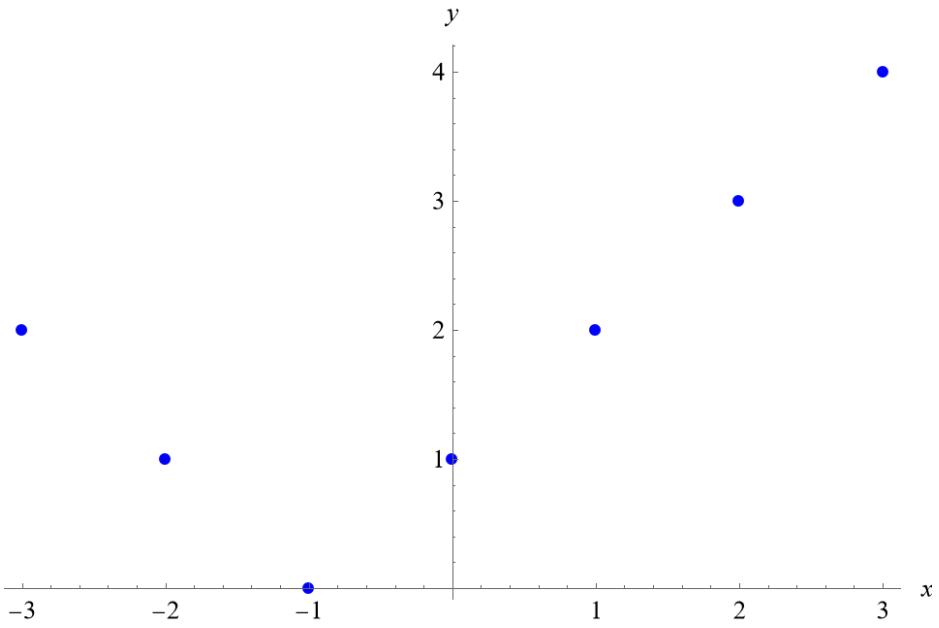
$$y = |x + 1|$$

Solution

Evaluate y for several integer values of x.

$$\begin{aligned}
x = -3: &\quad y = |-3 + 1| = 2 \\
x = -2: &\quad y = |-2 + 1| = 1 \\
x = -1: &\quad y = |-1 + 1| = 0 \\
x = 0: &\quad y = |0 + 1| = 1 \\
x = 1: &\quad y = |1 + 1| = 2 \\
x = 2: &\quad y = |2 + 1| = 3 \\
x = 3: &\quad y = |3 + 1| = 4
\end{aligned}$$

The points to plot are $(-3, 2)$, $(-2, 1)$, $(-1, 0)$, $(0, 1)$, $(1, 2)$, $(2, 3)$, and $(3, 4)$.



Connect the dots to get the graph of $y = |x + 1|$.