Exercise 25

For the following exercises, set up a table to sketch the graph of each function using the following values: $x = -3, -2, -1, 0, 1, 2, 3$.

$$f(x) = 2|x|$$

x	y	x	y
−3	6	1	2
−2	4	2	4
−1	2	3	6
0	0		

Solution

Plug the values of x into the given function $f(x)$.

$$f(-3) = 2|-3| = 2(3) = 6$$

$$f(-2) = 2|-2| = 2(2) = 4$$

$$f(-1) = 2|-1| = 2(1) = 2$$

$$f(0) = 2|0| = 2(0) = 0$$

$$f(1) = 2|1| = 2(1) = 2$$

$$f(2) = 2|2| = 2(2) = 4$$

$$f(3) = 2|3| = 2(3) = 6$$

Now plot the points and connect the dots.