

## Exercise 22

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

$$f(x) = x^2 + 1$$

$x$	$y$	$x$	$y$
-3	10	1	2
-2	5	2	5
-1	2	3	10
0	1		

### Solution

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

$$f(-3) = (-3)^2 + 1 = 9 + 1 = 10$$

$$f(-2) = (-2)^2 + 1 = 4 + 1 = 5$$

$$f(-1) = (-1)^2 + 1 = 1 + 1 = 2$$

$$f(0) = (0)^2 + 1 = 0 + 1 = 1$$

$$f(1) = (1)^2 + 1 = 1 + 1 = 2$$

$$f(2) = (2)^2 + 1 = 4 + 1 = 5$$

$$f(3) = (3)^2 + 1 = 9 + 1 = 10$$

Now plot the points and connect the dots.

