

## Exercise 10

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

$$y = (x - 3)^2$$

### Solution

Evaluate  $y$  for several integer values of  $x$ .

$$x = 0: \quad y = (0 - 3)^2 = 9$$

$$x = 1: \quad y = (1 - 3)^2 = 4$$

$$x = 2: \quad y = (2 - 3)^2 = 1$$

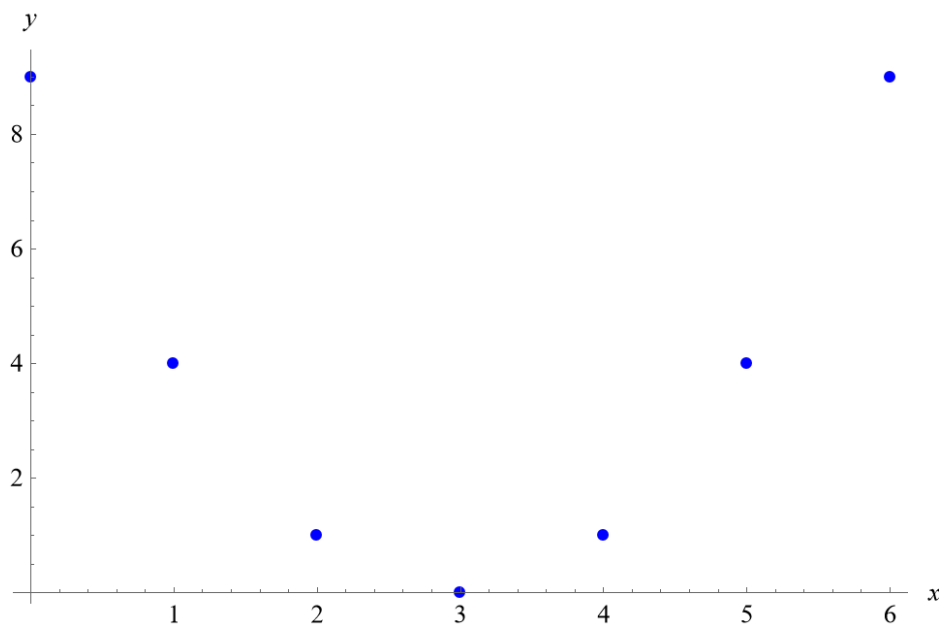
$$x = 3: \quad y = (3 - 3)^2 = 0$$

$$x = 4: \quad y = (4 - 3)^2 = 1$$

$$x = 5: \quad y = (5 - 3)^2 = 4$$

$$x = 6: \quad y = (6 - 3)^2 = 9$$

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



Connect the dots to get the graph of  $y = (x - 3)^2$ .

