

Exercise 29

For the following exercises, evaluate f at the indicated values $f(-3)$, $f(2)$, $f(-a)$, $-f(a)$, $f(a+h)$.

$$f(x) = \sqrt{2-x} + 5$$

Solution

Evaluate the function at each of the given numbers.

$$f(-3) = \sqrt{2 - (-3)} + 5 = \sqrt{5} + 5$$

$$f(2) = \sqrt{2 - (2)} + 5 = 0 + 5 = 5$$

$$f(-a) = \sqrt{2 - (-a)} + 5 = \sqrt{2 + a} + 5$$

$$-f(a) = -[\sqrt{2 - (a)} + 5] = -\sqrt{2 - a} - 5$$

$$f(a+h) = \sqrt{2 - (a+h)} + 5 = \sqrt{2 - a - h} + 5$$