

Exercise 229

For the following exercises, evaluate the given exponential functions as indicated, accurate to two significant digits after the decimal.

$$f(x) = 5^x \text{ a. } x = 3 \text{ b. } x = \frac{1}{2} \text{ c. } x = \sqrt{2}$$

Solution

- a. If $x = 3$, then $f(x) = 5^3 = 125.00$.
- b. If $x = \frac{1}{2}$, then $f(x) = 5^{1/2} = \sqrt{5} \approx 2.24$.
- c. If $x = \sqrt{2}$, then $f(x) = 5^{\sqrt{2}} \approx 9.74$.