

Chapter 1

Functions and Graphs

Exercise Solution

Exercise 1.1.51

Instruction

The volume of a cube depends on the length of the sides s .

- (a) Write a function $V(s)$ for the volume of the cube.
- (b) Find an interpret $V(11.8)$.

Solution

- (a) A cube will have sides s of equal length. The volume is found by multiplying s three times

$$V(s) = s \cdot s \cdot s = s^3.$$

- (b) A cube with the side equal to 11.8 length units will have the volume

$$V(11.8) = 11.8^3 \approx 1643$$

cubic units.

Answer

- (a) $V(s) = s^3$.
- (b) $V(11.8) = 11.8^3 \approx 1643$ cubic units.