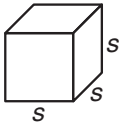
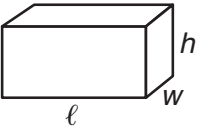


SKILL

42 Volume

Definition: Volume is a measure of the amount of space a solid, liquid or gas occupies. Volume units are always cubic units.

Volume Formulas	
Cube	Rectangular Prism
	
$V = s^3$	$V = \ell \cdot w \cdot h$

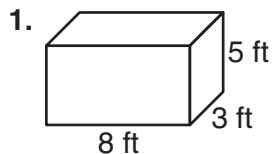
Example: Find the volume of a rectangular prism with height 2 cm, width 7 cm, and length 10 cm.

Answer: Since each of the dimensions is given, substitute the values into the equation for volume and simplify:

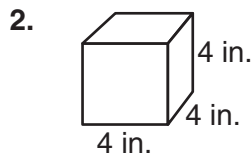
$$\begin{aligned}
 V &= \ell \cdot w \cdot h \text{ (with } \ell = 10, w = 7, \text{ and } h = 2) \\
 &= 10 \cdot 7 \cdot 2 \\
 &= 140 \text{ cm}^3
 \end{aligned}$$

Practice on Your Own

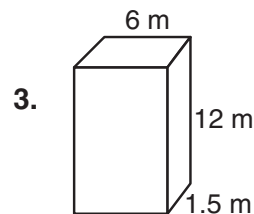
Find the volume of each solid.



$V = \underline{\hspace{2cm}}$



$V = \underline{\hspace{2cm}}$



$V = \underline{\hspace{2cm}}$

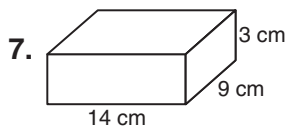
4. A rectangular prism with height 9 m, width 7 m, and length 1 m _____

5. A cube with side length 5 in. _____

6. A rectangular prism with height 6 cm and a square base with side length 3 cm _____

Check

Find the volume of each solid.



$V = \underline{\hspace{2cm}}$

8. A rectangular prism with height 2.5 ft, width 8 ft, and length 16 ft _____

9. A cube with side length 10 in. _____