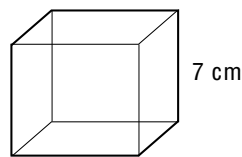


## Finding Volume

**Volume** ( $V$ ) is the amount of space something occupies. It is expressed in cubic units, such as cubic meters ( $m^3$ ) and cubic centimeters ( $cm^3$ ). Use the equations for volume below to calculate the volume of cubes and prisms.

**EQUATIONS:** Volume of a cube = side  $\times$  side  $\times$  side  
 Volume of a prism = area of base  $\times$  height

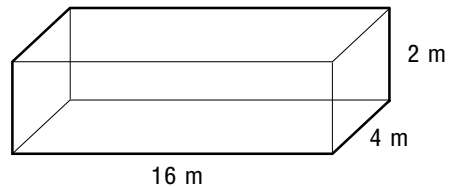
**SAMPLE PROBLEMS:** Find the volume ( $V$ ) of the solids.



$$V = \text{side} \times \text{side} \times \text{side}$$

$$V = 7 \text{ cm} \times 7 \text{ cm} \times 7 \text{ cm}$$

$$V = \mathbf{343 \text{ cm}^3}$$



$$V = \text{area of base} \times \text{height}$$

$$V = (\text{length} \times \text{width}) \times \text{height}$$

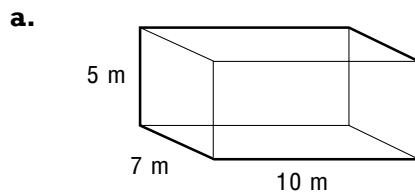
$$V = (16 \text{ m} \times 4 \text{ m}) \times 2 \text{ m}$$

$$V = 64 \text{ m}^2 \times 2 \text{ m}$$

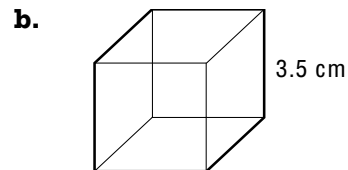
$$V = \mathbf{128 \text{ m}^3}$$

### Turn Up the Volume!

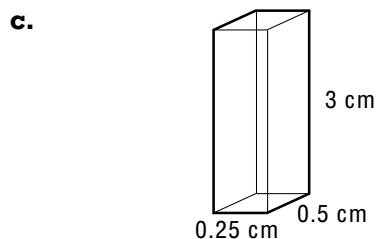
1. Find the volume of the solids.



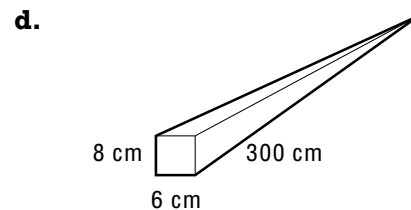
$$V = \underline{\hspace{10em}}$$



$$V = \underline{\hspace{10em}}$$



$$V = \underline{\hspace{10em}}$$



$$V = \underline{\hspace{10em}}$$

### Challenge Yourself!

2. A rectangular-shaped swimming pool is 50 m long and 2.5 m deep and holds 2500  $m^3$  of water. What is the width of the pool?