

# Understanding Volume

MathLinks 8, pages 246–253

## Key Ideas Review

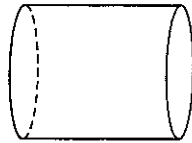
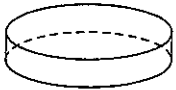
Choose from the following terms to complete #1.

base      cylinder      does      does not      height      prism

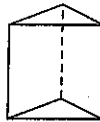
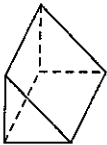
1. a) Volume of a right \_\_\_\_\_ or right \_\_\_\_\_ is found by multiplying the area of the \_\_\_\_\_ and the \_\_\_\_\_.

b) If you change the orientation, it \_\_\_\_\_ affect the volume.

2. a) Shade the base of each right cylinder.



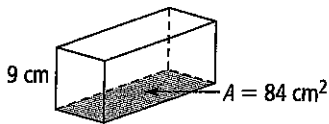
b) Shade the base of each right triangular prism.



## Practise and Apply

3. Use the figure measurements to calculate the volume.

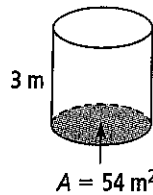
a)



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

$V = \text{_____}$

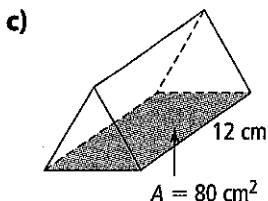
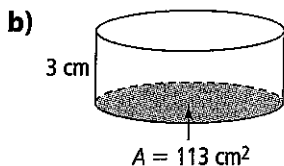
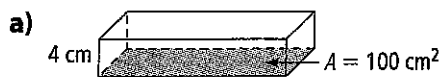
b)



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

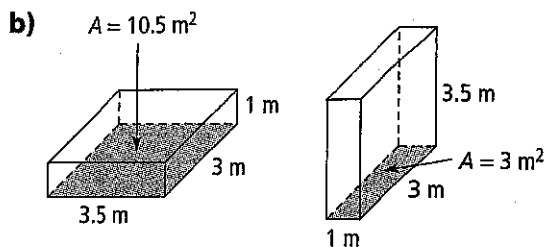
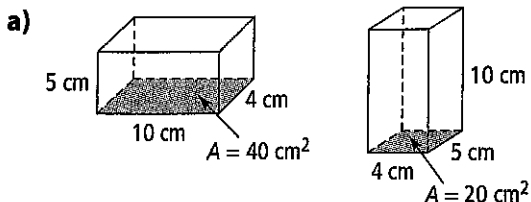
$V = \text{_____}$

4. Calculate the volume of each prism or cylinder.



5. What is the volume of a right prism that has a base with an area of  $15 \text{ cm}^2$  and a height of  $7 \text{ cm}$ ?

6. Which rectangular prism has the larger volume? Show your thinking.



7. Calculate the height of each rectangular prism.

a) volume =  $63 \text{ cm}^3$   
area of base =  $9 \text{ cm}^2$

b) volume =  $26 \text{ m}^3$   
area of base =  $4 \text{ m}^2$

8. Nikki and Taylor have to fill the pool this summer. The area of the pool bottom is  $27 \text{ m}^2$ . The height that the water needs to be is  $0.9 \text{ m}$ . How much water do they need to put in the pool?

9. Chad wants to cut back on the amount of treats he is eating. He has two chocolate bars to choose from. Which one has less chocolate? Show your thinking.

