

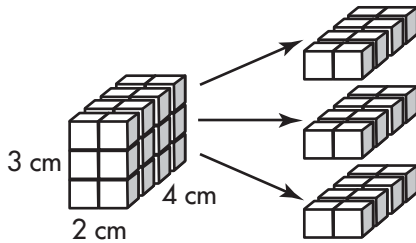
Name _____

Volume

Volume is a measure of the space inside a solid figure. It is measured in cubic units. A **cubic unit** is the volume of a cube that has edges that are each 1 unit.

How to find the volume of a rectangular prism

Counting unit cubes:



Count the cubes in each layer: 8 cubes.

Multiply by the number of layers.

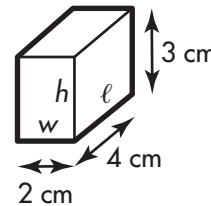
$$8 \text{ cubes} \times 3 = 24 \text{ cubes}$$

The volume of each cube is 1 cm^3 .

The volume of the prism is 24 cm^3 .

Using a formula:

You know the length ℓ , the width w , and the height h . Calculate the volume, V , using the formula $V = \ell \times w \times h$.

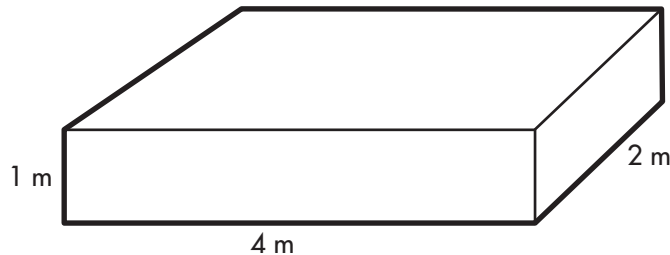


$$V = 4 \text{ cm} \times 2 \text{ cm} \times 3 \text{ cm}$$

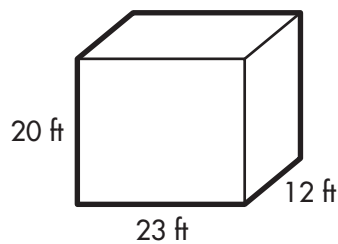
$$V = 24 \text{ cm}^3$$

Find the volume of each rectangular prism using a formula.

1.



2.



Name _____

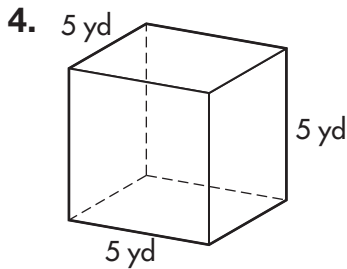
Volume

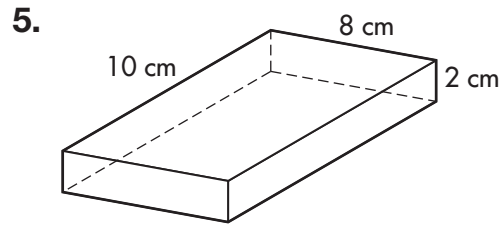
Find the volume of each rectangular prism.

1. base area 56 in^2 , height 6 in.

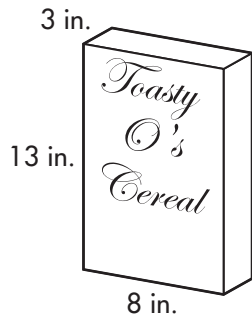
2. base area 32 cm^2 , height 12 cm

3. base area 42 m^2 , height 8 m





6. What is the volume of the cereal box?



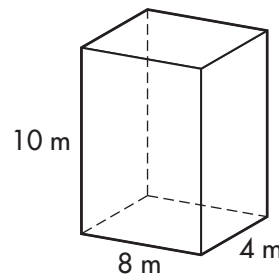
7. What is the volume of this solid?

A 3.2 m^3

C 320 m^3

B 32 m^3

D $3,200 \text{ m}^3$



8. What is the height of a solid with a volume of 120 m^3 and base area of 30 m^2 ?

9. Bradford has an aquarium with a base that is 22 inches \times 12 inches and a height that is 15 inches. What is the volume of the aquarium? Would the volume of the aquarium change if it did not have a lid? Explain.
