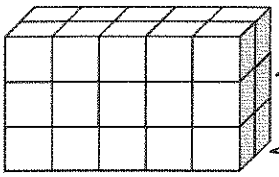
G5-M5-Lesson 4

1. Each rectangular prism is built from centimeter cubes. State the dimensions, and find the volume.

a.



The height of the rectangular prism is 3 cm.

The width of the rectangular prism is 2 cm.

The length of the rectangular prism is 5 cm.

Length: 5 cm

Width: 2 cm

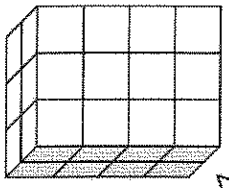
Height: 3 cm

Volume: 30 cm^3

Volume is equal to length times width times height. I can multiply 5 cm by 2 cm by 3 cm, which is 30 cm^3.

b.

The length of the rectangular prism is 4 cm.



The height of the rectangular prism is 3 cm.

The width of the rectangular prism is 2 cm.

Length: 4 cm

Width: 2 cm

Height: 3 cm

Volume: 24 cm^3

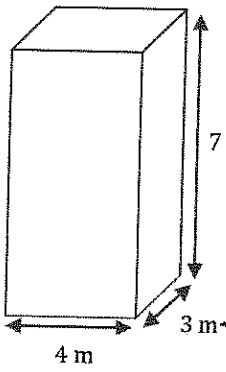
Volume = $l \times w \times h$. I can multiply 4 cm by 2 cm by 3 cm, which is 24 cm^3.

2. Write a multiplication sentence that you could use to calculate the volume for each rectangular prism in Problem 1. Include the units in your sentences.

a. $5 \text{ cm} \times 2 \text{ cm} \times 3 \text{ cm} = 30 \text{ cm}^3$

b. $4 \text{ cm} \times 2 \text{ cm} \times 3 \text{ cm} = 24 \text{ cm}^3$

3. Calculate the volume of each rectangular prism. Include the units in your number sentences.



The height of the rectangular prism is 7 meters.

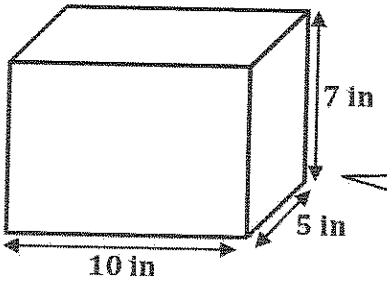
The width of the rectangular prism is 3 meters.

The length of the rectangular prism is 4 meters.

$V =$ $4 \text{ m} \times 3 \text{ m} \times 7 \text{ m} = 84 \text{ m}^3$

I multiply the 3 dimensions together to find the volume.

4. Meilin is constructing a box in the shape of a rectangular prism to store her small toys. It has a length of 10 inches, a width of 5 inches, and a height of 7 inches. What is the volume of the box?



The rectangular prism measures 10 inches by 5 inches by 7 inches.

I draw a rectangular prism and label the length as 10 inches, width as 5 inches, and height as 7 inches.

$\text{Volume} = \text{length} \times \text{width} \times \text{height}$

$V = 10 \text{ in} \times 5 \text{ in} \times 7 \text{ in} = 350 \text{ in}^3$

The volume of the box is 350 cubic inches.