

Lesson 5-10

Reinforce Understanding

Volume of Rectangular Prisms

I can find the volume of a rectangular prism, including ones with fractional edge lengths, using base area $\times$ height.

Worked model

My capsule is 2 ft long, 1.5 ft wide, and 1 ft tall. I write $V = \text{length} \times \text{width} \times \text{height}$.

1. I put in the numbers: $V = 2 \times 1.5 \times 1$.
2. First I multiply $2 \times 1.5 = 3$.
3. Then $3 \times 1 = 3$.
4. So the volume is 3 ft^3 . A fractional edge like 1.5 did not change my steps at all.

Practice

Complete each exercise. Show the reasoning that supports your answer.

1. Find the volume of each rectangular prism.

Complete the table. Show how you found each value.

Length	Width	Height	Volume
8 in	5 in	2 in	
4 cm	4 cm	4 cm	
10 ft	3 ft	6 ft	

Show your work

2. Sort these boxes from SMALLEST volume to LARGEST volume.

Write the name of the correct group on each line.

Groups:

- _____ $4 \times 4 \times 4$
- _____ $10 \times 2 \times 3$
- _____ $6 \times 5 \times 3$
- _____ $2 \times 2 \times 5$
- _____ $7 \times 3 \times 4$

3. What is the volume of a rectangular prism with $l = 4 \text{ in}$, $w = 3 \text{ in}$, $h = 5 \text{ in}$?

Circle the letter of the best answer. Show how you know.

- A. 12 in^3
- B. 24 in^3
- C. 60 in^3
- D. 60 in^2