

Lesson 1-4 • Group 2

Reinforce Understanding

1.4 Small Group • Group 2

I can construct an argument using equations, drawings, or words, and use volume to defend a recommendation, explain what each part stands for, and build one for a situation I have not seen before.

Worked model

Suppose each large box is 8 inches long, 3 inches wide, and 10 inches tall. Its volume is $8 \times 3 \times 10 = 240$ cubic inches, so three large boxes hold $240 \times 3 = 720$ cubic inches.

1. Suppose each jumbo box is 10 inches long, 4 inches wide, and 10 inches tall. Its volume is $10 \times 4 \times 10 = 400$ cubic inches, so two jumbo boxes hold $400 \times 2 = 800$ cubic inches.
2. I recommend buying two jumbo boxes because 800 cubic inches is greater than 720 cubic inches — the total volume is greater, so there is more cereal for the same price.

Practice

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

1. Compute the volume of each cereal box.

Complete the table. Show how you found each value.

Box (l × w × h, inches)	Volume (cubic inches)
$8 \times 3 \times 10$	
$5 \times 8 \times 10$	
$6 \times 4 \times 5$	

Show your work

2. Match each prism to a DIFFERENT prism with the SAME volume.

Write the letter of the matching item on each line.

1. _____ $8 \times 3 \times 10$
 2. _____ $4 \times 3 \times 2$
 3. _____ $5 \times 8 \times 10$
 4. _____ $6 \times 2 \times 4$
- A $6 \times 4 \times 10$
 - B $6 \times 2 \times 2$
 - C $20 \times 10 \times 2$
 - D $8 \times 3 \times 2$