LESSON MAKER PRO

Space Inside Things

Measure volume and capacity in real situations.

GRADE 5 · 5.MG.2.c

5.MG.2.c "Describe volume as a measure of capacity and give examples of volume as a measurement in contextual situations."

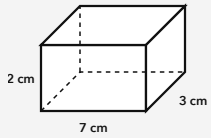
NAME _____ DATE _____

VOLUME AND CAPACITY

Volume tells how much space is inside a solid. Measure volume in cubic units, such as cubic centimeters. Capacity tells how much liquid a container can hold, often in milliliters or liters.

WORKED EXAMPLE

Find the volume of the rectangular prism.

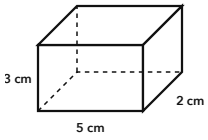


1. Use volume = length × width × height.
2. Multiply 7 × 3 = 21.
3. Multiply 21 × 2 = 42.

Answer: 42 cubic cm

PRACTICE 6 problems

1 Find the volume of the rectangular prism.



ANSWER _____

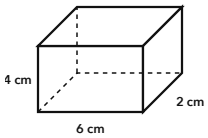
2 A water jug can hold 18 liters of water. Is 18 liters a measure of volume or capacity?

ANSWER _____

3 A carton holds 750 mL of milk. What is the carton's capacity?

ANSWER _____

4 Find the volume of the rectangular prism.



ANSWER _____

5 A storage box is 4 cm long, 3 cm wide, and 5 cm high. Find its volume.

ANSWER _____

6 A bottle has a capacity of 1 liter. How many milliliters can it hold?

ANSWER _____

APPLY IT Show your work

1 A student is making a habitat for a pet lizard. The rectangular tank is 8 inches long, 3 inches wide, and 4 inches high. What is the volume of space inside the tank?

WORK SPACE

ANSWER _____

2 The art club has a 12-liter drink cooler for its meeting. Students pour in 8 bottles of juice, and each bottle holds 750 mL. How many liters of capacity are still empty in the cooler?

WORK SPACE

ANSWER _____

CHALLENGE One step up

A rectangular container has a volume of 72 cubic cm. It is 6 cm long and 3 cm wide. What is its height? Then explain what the 72 cubic cm tells about the container.

WORK SPACE AND ANSWER

ANSWER KEY

Space Inside Things

GRADE 5 · 5.MG.2.c

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Find the volume of the rectangular prism.	**30 cubic cm**
2	A water jug can hold 18 liters of water. Is 18 liters a measure of volume or capacity?	**capacity**
3	A carton holds 750 mL of milk. What is the carton's capacity?	**750 mL**
4	Find the volume of the rectangular prism.	**48 cubic cm**
5	A storage box is 4 cm long, 3 cm wide, and 5 cm high. Find its volume.	**60 cubic cm**
6	A bottle has a capacity of 1 liter. How many milliliters can it hold?	**1,000 mL**

PART 2 · APPLY IT

1. **96 cubic inches** Multiply 8 × 3 × 4. The tank has a volume of 96 cubic inches.
2. **6 L** Eight bottles hold 8 × 750 = 6,000 mL, or 6 L. Subtract 6 L from the 12 L capacity.

CHALLENGE

4 cm; The container has space for 72 cubic centimeters inside.

Accept "cm³" or "cubic centimeters" for cubic cm, and "cubic inches" or "in³" for the first word problem. For the challenge explanation, accept any clear statement that 72 cubic cm measures the space inside the container.