LESSON MAKER PRO

Prism Space Quest

Find the space inside rectangular prisms.

GRADE 5 · MA.5.GR.3

MA.5.GR.3 "Solve problems involving the volume of right rectangular prisms."

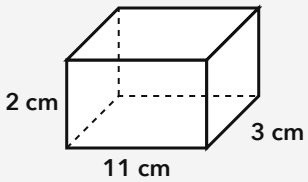
NAME _____ DATE _____

FIND VOLUME

Volume tells how much space is inside a solid. To find the volume of a right rectangular prism, multiply its length, width, and height. Write the answer in cubic units.

WORKED EXAMPLE

Find the volume of the rectangular prism shown.

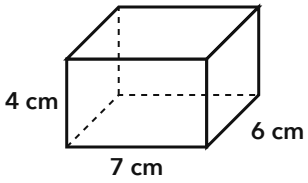


1. Multiply length × width × height.
2. 11 × 3 × 2 = 33 × 2.
3. 33 × 2 = 66.

Answer: 66 cm^3

PRACTICE 6 problems

1 What is the volume of the rectangular prism shown?



ANSWER _____

2 A rectangular prism is 10 cm long, 8 cm wide, and 5 cm high. What is its volume?

ANSWER _____

3 A rectangular prism has a volume of 216 cm^3. Its length is 9 cm and its width is 6 cm. What is its height?

ANSWER _____

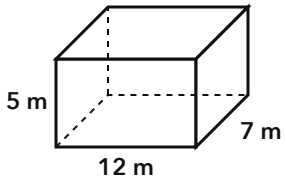
4 Find the volume of a rectangular prism that is 14 in. long, 5 in. wide, and 7 in. high.

ANSWER _____

5 A rectangular prism has a base area of 48 cm^2 and a height of 9 cm. What is its volume?

ANSWER _____

6 What is the volume of the rectangular prism shown?



ANSWER _____

APPLY IT Show your work

1 Maya makes a rectangular storage box for her trading cards. The box is 15 in. long, 8 in. wide, and 6 in. high. What is the volume of the box?

WORK SPACE

ANSWER _____

2 A pet habitat is shaped like a rectangular prism. The inside is 16 in. long, 9 in. wide, and 7 in. high. What volume of space is inside the habitat?

WORK SPACE

ANSWER _____

CHALLENGE One step up

Box A is 14 in. long, 8 in. wide, and 6 in. high. Box B is 12 in. long, 10 in. wide, and 7 in. high. Which box has the greater volume, and by how many cubic inches? Show both volumes.

WORK SPACE AND ANSWER

ANSWER KEY # Prism Space Quest

GRADE 5 · MA.5.GR.3

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	What is the volume of the rectangular prism shown?	**168 cm^3**
2	A rectangular prism is 10 cm long, 8 cm wide, and 5 cm high. What is its volume?	**400 cm^3**
3	A rectangular prism has a volume of 216 cm^3. Its length is 9 cm and its width is 6 cm. What is its height?	**4 cm**
4	Find the volume of a rectangular prism that is 14 in. long, 5 in. wide, and 7 in. high.	**490 $in.^3$**
5	A rectangular prism has a base area of 48 cm^2 and a height of 9 cm. What is its volume?	**432 cm^3**
6	What is the volume of the rectangular prism shown?	**420 m^3**

PART 2 · APPLY IT

1. **720 $in.^3$** Multiply 15 × 8 × 6. The product is 720 cubic inches.
2. **1,008 $in.^3$** Multiply 16 × 9 × 7. The product is 1,008 cubic inches.

CHALLENGE

Box B has the greater volume by 168 $in.^3$. Box A: 672 $in.^3$; Box B: 840 $in.^3$.

Accept equivalent multiplication order and correctly labeled cubic units for volume. For the challenge, students should identify Box B and show a difference of 168 cubic inches.