LESSON MAKER PRO

Measure It All

Use area, surface area, and volume to solve shape problems.

GRADE 6 · 6.GSR.5

6.GSR.5 "Solve relevant problems involving area, surface area, and volume."

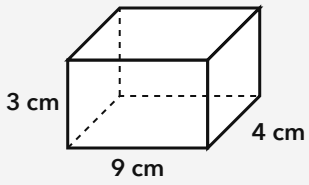
NAME _____ DATE _____

THREE WAYS TO MEASURE

Area measures the space inside a flat shape. For a rectangular prism, volume = length × width × height. Surface area is the total area of all the outside faces.

WORKED EXAMPLE

Find the surface area of the rectangular prism shown.

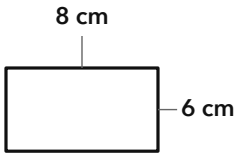


1. Find the areas of the three different face pairs: 9 × 4, 9 × 3, and 4 × 3.
2. Add one of each face area: 36 + 27 + 12 = 75.
3. Multiply by 2 because each face has a matching opposite face: 2 × 75 = 150.

Answer: 150 cm²

PRACTICE 6 problems

1 Find the area of the rectangle shown.

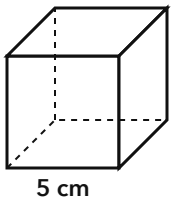


ANSWER _____

2 A triangular flag has a base of 12 cm and a perpendicular height of 7 cm. What is its area?

ANSWER _____

3 Find the volume of the cube shown. Each side is 5 cm long.



ANSWER _____

4 A rectangular prism is 11 cm long, 5 cm wide, and 6 cm high. Find its volume.

ANSWER _____

5 A cube has side length 7 cm. Find its surface area.

ANSWER _____

6 A rectangular floor is 14 m long and 8 m wide. Find its area.

ANSWER _____

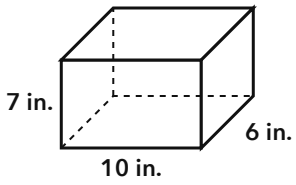
APPLY IT Show your work

1 The esports club is making a rectangular banner that is 18 ft long and 7 ft wide. How many square feet of fabric are needed to make the banner?

WORK SPACE

ANSWER _____

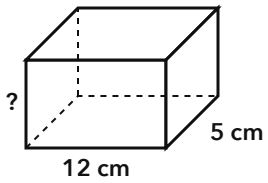
2 A game organizer is shaped like the rectangular prism shown. How much space is inside the organizer?



ANSWER _____

CHALLENGE One step up

The rectangular prism shown has a volume of 360 cm^3. First find its height. Then find its surface area.



WORK SPACE AND ANSWER

ANSWER KEY # Measure It All

GRADE 6 · 6.GSR.5

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Find the area of the rectangle shown.	**48 cm^2**
2	A triangular flag has a base of 12 cm and a perpendicular height of 7 cm. What is its area?	**42 cm^2**
3	Find the volume of the cube shown. Each side is 5 cm long.	**125 cm^3**
4	A rectangular prism is 11 cm long, 5 cm wide, and 6 cm high. Find its volume.	**330 cm^3**
5	A cube has side length 7 cm. Find its surface area.	**294 cm^2**
6	A rectangular floor is 14 m long and 8 m wide. Find its area.	**112 m^2**

PART 2 · APPLY IT

1. **126 ft^2** Multiply the banner's length by its width: 18 × 7 = 126.
2. **420 in^3** Multiply the three dimensions: 10 × 6 × 7 = 420.

CHALLENGE

Height = 6 cm; surface area = 324 cm^2.

Accept equivalent multiplication expressions and correct units. For the challenge, accept correct work showing 360 ÷ (12 × 5) = 6 before finding the surface area.