LESSON MAKER PRO

Measure It Right

Choose perimeter, area, or volume for each situation.

GRADE 5 · 5.MG.2

5.MG.2 "The student will use multiple representations to solve problems, including those in context, involving perimeter, area, and volume. Investigate and develop a formula for determining the area of a right triangle..."

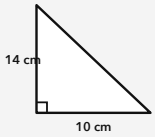
NAME _____ DATE _____

PICK THE MEASURE

Perimeter measures the distance around a shape, area measures the flat surface covered, and volume measures the space a solid can hold. For a right triangle, multiply the base by the height and divide by 2. For a rectangular prism, multiply length, width, and height.

WORKED EXAMPLE

Find the area of the right triangle shown.

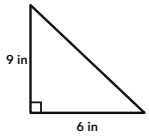


1. Use area = base × height / 2.
2. Area = 14 × 10 / 2 = 140 / 2.
3. Area = 70 square centimeters.

Answer: 70 square centimeters

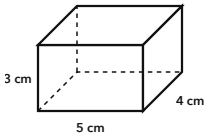
PRACTICE 6 problems

1 Find the area of the right triangle shown.



ANSWER _____

2 Find the volume of the rectangular prism shown.



ANSWER _____

3 A rectangular bulletin board is 11 yards long and 7 yards wide. What is its perimeter?

ANSWER _____

4 A storage box is 8 feet long, 2 feet wide, and 6 feet high. What is its volume?

ANSWER _____

5 A right triangle has a base of 12 meters and a height of 5 meters. What is its area?

ANSWER _____

6 A gardener wants to know how much soil a rectangular planter can hold. Should the gardener find perimeter, area, or volume? Write why.

ANSWER _____

APPLY IT Show your work

1 Riley makes a triangular pennant for the school game. The pennant has a base of 18 inches and a height of 7 inches. How much fabric is on one side of the pennant?

WORK SPACE

ANSWER _____

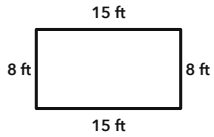
2 Marcus stores game pieces in a rectangular box that is 9 inches long, 4 inches wide, and 5 inches high. What is the box's capacity in cubic inches?

WORK SPACE

ANSWER _____

CHALLENGE One step up

One 15-foot side of the garden shown touches a wall, so that side does not need fencing. The other three sides need fencing that costs $3 per foot. How much will the fencing cost? How many square feet of soil will cover the garden? Explain which calculation finds each answer.



WORK SPACE AND ANSWER

ANSWER KEY

Measure It Right

GRADE 5 · 5.MG.2

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Find the area of the right triangle shown.	**27 square inches**
2	Find the volume of the rectangular prism shown.	**60 cubic centimeters**
3	A rectangular bulletin board is 11 yards long and 7 yards wide. What is its perimeter?	**36 yards**
4	A storage box is 8 feet long, 2 feet wide, and 6 feet high. What is its volume?	**96 cubic feet**
5	A right triangle has a base of 12 meters and a height of 5 meters. What is its area?	**30 square meters**
6	A gardener wants to know how much soil a rectangular planter can hold. Should the gardener find perimeter, area, or volume? Write why.	**Volume, because it measures the space the planter can hold.**

PART 2 · APPLY IT

1. **63 square inches** Use the area of a right triangle. Calculate 18 × 7 / 2 = 63.
2. **180 cubic inches** Use volume = length × width × height. Calculate 9 × 4 × 5 = 180.

CHALLENGE

The three fenced sides total 15 + 8 + 8 = 31 feet, so the fencing costs $93. The soil covers 15 × 8 = 120 square feet, because soil uses area.

Accept standard abbreviations for units, such as sq. in. or cm^3. For the challenge, students should identify perimeter for fencing and area for soil.