LESSON MAKER PRO

Area in Action

Use area formulas to solve figure and context problems.

HIGH SCHOOL · MA.912.GR.4.4

MA.912.GR.4.4 "Solve mathematical and real-world problems involving the area of two-dimensional figures."

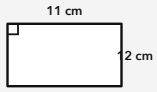
NAME _____ DATE _____

AREA RULES

Area measures the space inside a two-dimensional figure. For a rectangle, multiply length by width. For a triangle, use A = 1/2bh, and for a circle, use $A = \pi r^2$.

WORKED EXAMPLE

Find the area of the rectangle shown.

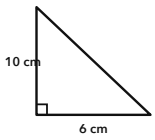


1. Use A = l × w.
2. A = 11 × 12.
3. A = 132.

Answer: 132 cm²

PRACTICE 6 problems

1 Find the area of the right triangle shown.

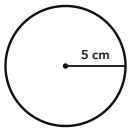


ANSWER _____

2 A rectangular phone-case design measures 15 cm by 7 cm. What is its area?

ANSWER _____

3 Find the area of the circle shown. Leave your answer in terms of π.



ANSWER _____

4 A triangle has a base of 16 m and a height of 3 m. Find its area.

ANSWER _____

5 A trapezoid has bases of 10 in. and 18 in. Its height is 6 in. Find its area.

ANSWER _____

6 A parallelogram has a base of 17 yd and a height of 4 yd. Find its area.

ANSWER _____

APPLY IT Show your work

1 The art club is painting a trapezoid mural for the school music room. The mural has bases of 22 ft and 14 ft and a height of 9 ft. How many square feet will the mural cover?

WORK SPACE

ANSWER _____

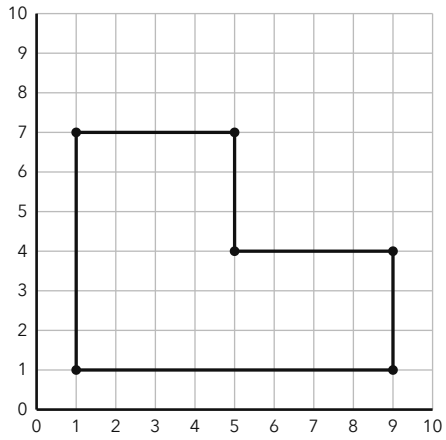
2 A robotics team marks a circular testing zone on the floor with a radius of 7 m. What is the area of the testing zone? Leave your answer in terms of π.

WORK SPACE

ANSWER _____

CHALLENGE One step up

The grid shows the outline of an L-shaped patio. Find its area in square units. Show how you can split the patio into rectangles.



WORK SPACE AND ANSWER

ANSWER KEY

Area in Action

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PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Find the area of the right triangle shown.	**30 cm^2**
2	A rectangular phone-case design measures 15 cm by 7 cm. What is its area?	**105 cm^2**
3	Find the area of the circle shown. Leave your answer in terms of π.	**25π cm^2**
4	A triangle has a base of 16 m and a height of 3 m. Find its area.	**24 m^2**
5	A trapezoid has bases of 10 in. and 18 in. Its height is 6 in. Find its area.	**84 in^2**
6	A parallelogram has a base of 17 yd and a height of 4 yd. Find its area.	**68 yd^2**

PART 2 · APPLY IT

1. **162 ft^2** Use the trapezoid formula: A = 1/2(22 + 14)(9). This equals 162 square feet.
2. **49π m^2** Use A = πr^2. Substituting 7 for the radius gives 49π square meters.

CHALLENGE

36 square units

Accept equivalent area units written with squared notation. For answers involving π, accept 25π and 49π with the correct square units, not decimal approximations.