LESSON MAKER PRO

Shape Space Lab

Measure flat space and solid space.

GRADE 6 · MA.6.GR.2

MA.6.GR.2 "Model and solve problems involving two-dimensional figures and three-dimensional figures."

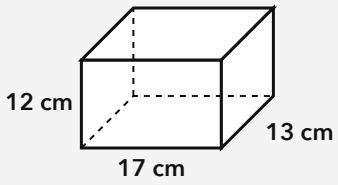
NAME _____ DATE _____

AREA AND VOLUME

Area measures the square units that cover a flat figure. Use A = l × w for a rectangle, A = 1/2 × b × h for a triangle, and V = l × w × h for a rectangular prism.

WORKED EXAMPLE

Find the volume of the rectangular prism shown.

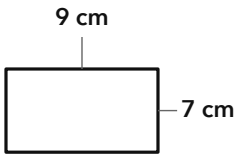


1. Use V = l × w × h.
2. V = 17 × 13 × 12.
3. V = 2,652 cm^3.
4. The prism holds 2,652 cubic centimeters.

Answer: 2,652 cm^3

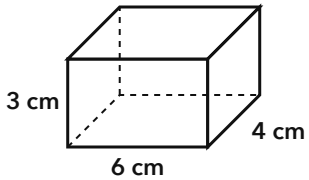
PRACTICE 6 problems

1 Find the area of the rectangle shown.



ANSWER _____

2 Find the volume of the rectangular prism shown.



ANSWER _____

3 A triangle has a base of 10 cm and a height of 7 cm. Find its area.

ANSWER _____

4 A rectangular tablet screen has an area of 72 cm^2 and a width of 8 cm. What is its length?

ANSWER _____

5 A rectangular prism is 10 cm long, 3 cm wide, and 9 cm high. Find its volume.

ANSWER _____

6 A cube has an edge length of 4 cm. Find its volume.

ANSWER _____

APPLY IT Show your work

1 The game club makes a rectangular poster that is 14 feet long and 9 feet wide. They cover it with square stickers that each cover 3 square feet. How many stickers do they need?

WORK SPACE

ANSWER _____

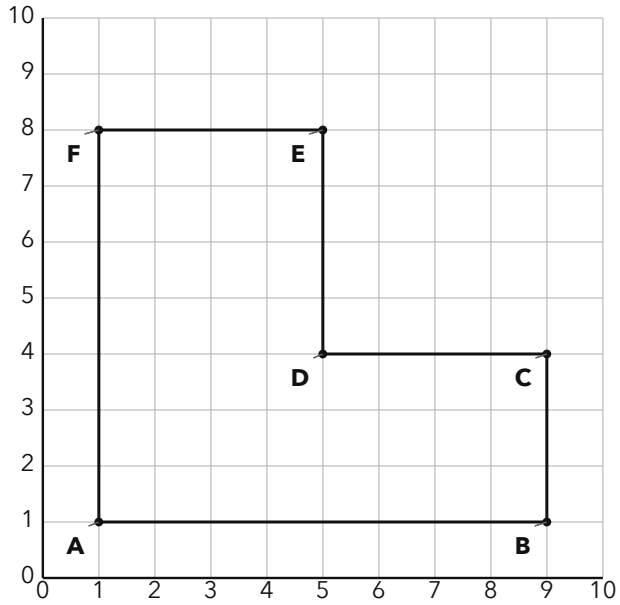
2 A student stores small game pieces in a rectangular box with inside dimensions of 15 cm by 6 cm by 4 cm. If 1 cm^3 cubes fill the box with no gaps, how many cubes fit?

WORK SPACE

ANSWER _____

CHALLENGE One step up

Find the area of the L-shaped polygon on the grid. Explain how you split the figure into rectangles.



WORK SPACE AND ANSWER

ANSWER KEY # Shape Space Lab

GRADE 6 · MA.6.GR.2

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Find the area of the rectangle shown.	**63 cm^2**
2	Find the volume of the rectangular prism shown.	**72 cm^3**
3	A triangle has a base of 10 cm and a height of 7 cm. Find its area.	**35 cm^2**
4	A rectangular tablet screen has an area of 72 cm^2 and a width of 8 cm. What is its length?	**9 cm**
5	A rectangular prism is 10 cm long, 3 cm wide, and 9 cm high. Find its volume.	**270 cm^3**
6	A cube has an edge length of 4 cm. Find its volume.	**64 cm^3**

PART 2 · APPLY IT

1. **42 stickers** Find the poster area, 14 × 9 = 126 square feet. Divide 126 by 3 square feet per sticker.
2. **360 cubes** Find the box volume, 15 × 6 × 4 = 360 cm^3. Each cube has a volume of 1 cm^3.

CHALLENGE

40 square units. Split the figure into an 8 by 3 rectangle and a 4 by 4 rectangle.

Accept equivalent area and volume units written in words. For the challenge, accept any correct decomposition or subtraction method that gives 40 square units.