LESSON MAKER PRO

Shape Shift Areas

Find area by splitting shapes or filling in missing pieces.

HIGH SCHOOL · GDA.GM.A

GDA.GM.A "Areas and volumes of figures can be computed by determining how the figure might be obtained from simpler figures by dissection and recombination."

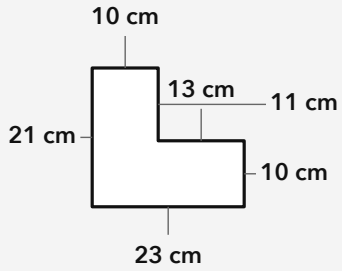
NAME _____ DATE _____

THE BIG IDEA

A shape made of straight edges can often be split into rectangles. Add the areas of the rectangles, or find the area of a larger rectangle and subtract the part that is missing. For each rectangle, area = length × width.

WORKED EXAMPLE

Find the area of the figure.

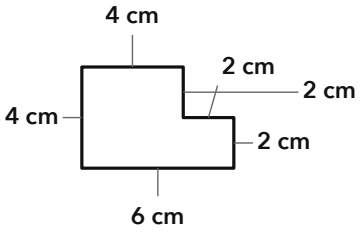


1. Find the area of the larger rectangle: 23 × 21 = 483 cm^2.
2. Find the area of the missing rectangle: 13 × 11 = 143 cm^2.
3. Subtract: 483 − 143 = 340 cm^2.

Answer: 340 cm^2

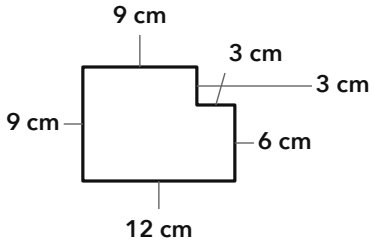
PRACTICE 6 problems

1 Find the area of the figure.



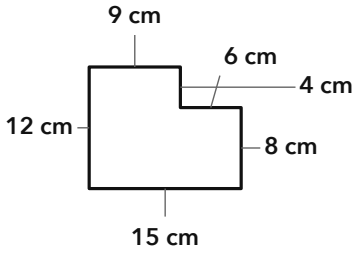
ANSWER _____

2 Find the area of the figure.



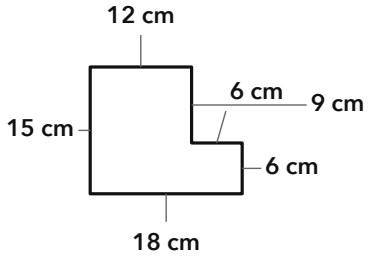
ANSWER _____

3 Find the area of the figure.



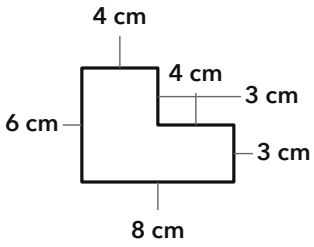
ANSWER _____

4 Find the area of the figure.



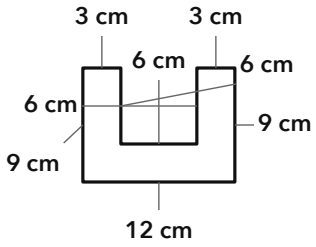
ANSWER _____

5 Find the area of the figure.



ANSWER _____

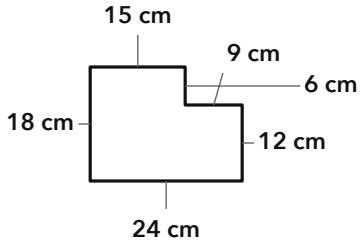
6 Find the area of the figure.



ANSWER _____

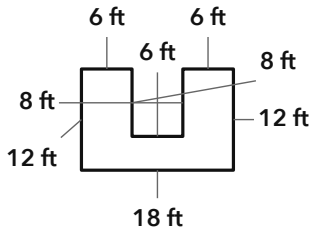
APPLY IT Show your work

1 A student orders a vinyl sticker shaped like the figure for a laptop. How many square centimeters of vinyl does one sticker use?



ANSWER _____

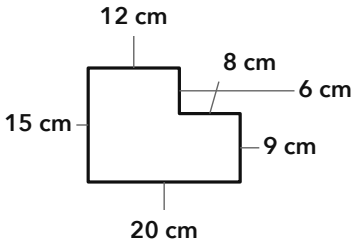
2 A school's gaming club covers the floor space shown with foam tiles. How many square feet must the tiles cover?



ANSWER _____

CHALLENGE One step up

Find the area of the figure in two different ways. Write an equation for each way.



WORK SPACE AND ANSWER

ANSWER KEY

Shape Shift Areas

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Find the area of the figure.	**20 cm^2**
2	Find the area of the figure.	**99 cm^2**
3	Find the area of the figure.	**156 cm^2**
4	Find the area of the figure.	**216 cm^2**
5	Find the area of the figure.	**36 cm^2**
6	Find the area of the figure.	**72 cm^2**

PART 2 · APPLY IT

1. **378 cm^2** Subtract the missing rectangle from the larger rectangle: $24 \times 18 - 9 \times 6 = 378$ cm^2.
2. **168 ft^2** Subtract the open section from the larger rectangle: $18 \times 12 - 6 \times 8 = 168$ ft^2.

CHALLENGE

252 cm^2. Subtract a rectangle: $20 \times 15 - 8 \times 6 = 252$. Add two rectangles: $20 \times 9 + 12 \times 6 = 252$.

Accept any correct dissection or subtraction method. Area answers must use square units.