



Splitting Shapes

MathApex

Name: _____

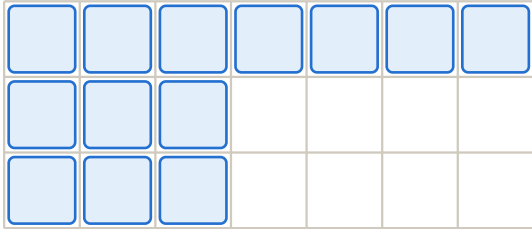
Date: _____



Watch video

From the video
Break the shape apart: 2 by 2 squares and 3 by 1 squares → $4 + 3 = 7$ squares
1 Now it's your turn!

3 by 3 squares and 4 by 1 squares: how many in all?



Break the shape into a square and a strip.

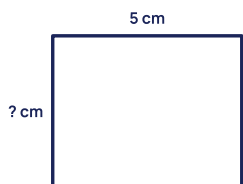
$$\square + \square = \square \text{ squares}$$

3 Without squares.

There are no squares to help you now. Calculate with the side lengths.



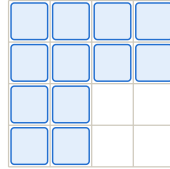
$$\square \times \square = \square \text{ cm}^2$$

5 Think backwards.
The rectangle has an area of 20 cm^2 and is 5 cm long. How wide is it?

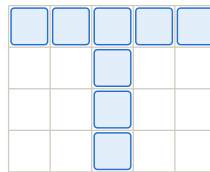
$$20 \div 5 = \square \text{ cm}$$

2 Break apart and count.

How many squares does each shape have?



$$\square + \square = \square \text{ squares}$$



$$\square + \square = \square \text{ squares}$$

4 Words only.

a) A rectangle is 9 cm long and 3 cm wide. What is the area?

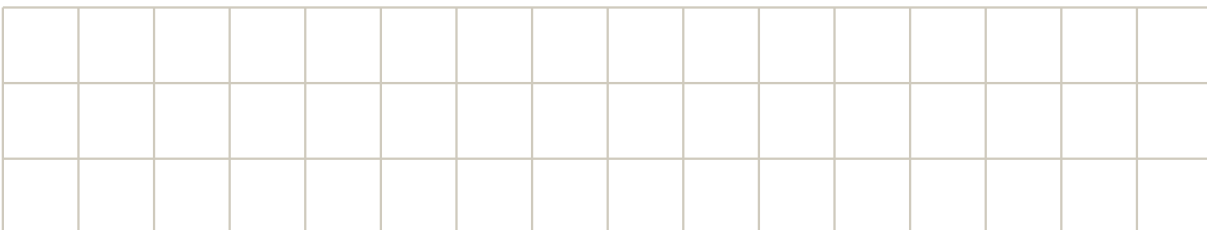
$$\square \times \square = \square \text{ cm}^2$$

b) A square has a side length of 3 cm. What is its area?

$$\square \times \square = \square \text{ cm}^2$$

★ Brain teaser

A rectangle is twice as long as it is wide. It is 2 cm wide. What is its area?

6 Draw two different rectangles with an area of 16 cm^2 each. Write the calculation next to them.




Splitting Shapes

**1** Now it's your turn!

$$9 + 4 = 13 \text{ squares}$$

$$3 \times 3 = 9 \text{ and } 4 \times 1 = 4.$$

2 Break apart and count.

$$4 \times 2 + 2 \times 2 = 12 \text{ squares}$$

$$5 \times 1 + 1 \times 3 = 8 \text{ squares}$$

3 Without squares.

$$8 \times 2 = 16 \text{ cm}^2$$

4 Words only.

$$9 \times 3 = 27 \text{ cm}^2$$

$$3 \times 3 = 9 \text{ cm}^2$$

5 Think backwards.

$$20 \div 5 = 4 \text{ cm}$$

$$\text{Check: } 5 \times 4 = 20 \text{ cm}^2$$

★ Brain teaser

$$4 \times 2 = 8 \text{ cm}^2$$

Length 4 cm, width 2 cm.

6 Rectangles with 16 cm^2 .

$$16 \times 1 = 16 \text{ cm}^2 \quad 8 \times 2 = 16 \text{ cm}^2 \quad 4 \times 4 = 16 \text{ cm}^2$$

For parents and teachers: This worksheet goes with the video "Splitting Shapes" (Math Story 64, Grade 4). The rectangles with squares are printed at actual size: 1 square = 1 cm^2 . Children may count first and then calculate.

More Math Stories with video and worksheet: www.mathapex.app/en/math-stories/