

WA6MMGTW3

Two-dimensional space and structures

Core + Challenge

Area of Rectangles

I can find the area of rectangles using $\text{length} \times \text{width}$, find missing sides and split up composite shapes.

Name: _____ Date: _____ Score: _____ / 56

Key idea

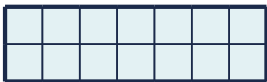
Area is the flat space inside a shape. It is measured in square units: cm^2 or m^2 .

A 7 cm by 2 cm rectangle has **2 rows of 7** squares: $2 \times 7 = 14 \text{ cm}^2$. So **area = length $\times$ width**.

To find a missing side, **divide** the area by the side you know: $14 \div 7 = 2 \text{ cm}$.

For shapes made of rectangles, **split** them into rectangles, find each area, then **add**.

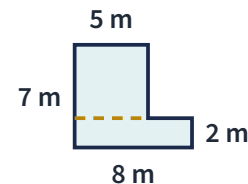
2 rows of 7 = 14 cm^2



7 cm $\times$ 2 cm = 14 cm^2



Split: $16 + 25 = 41 \text{ m}^2$

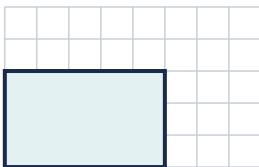


A Warm up *count, multiply and draw*

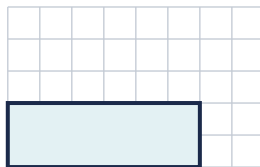
/ 16 marks

Each small square is 1 cm^2 . Write the area of each rectangle. 1 mark each.

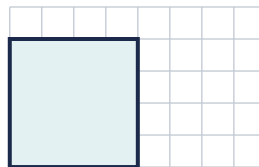
1



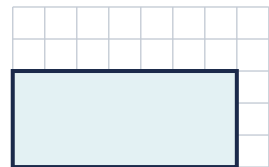
2



3

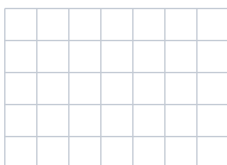


4

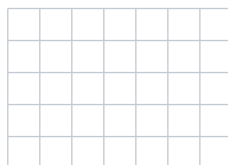


Draw a rectangle with the area given. Each square is 1 cm^2 . 1 mark each.

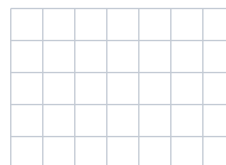
5 Area 6 cm^2



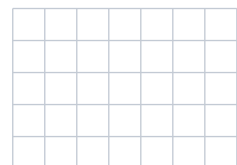
6 Area 10 cm^2



7 Area 12 cm^2



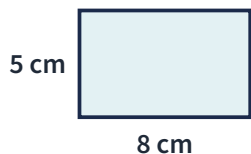
8 Area 8 cm^2



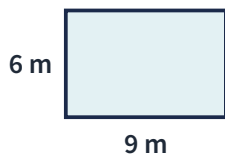
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Find the area. Use **length × width**. 1 mark each.

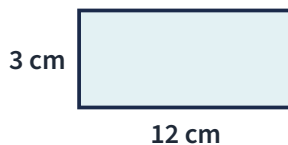
9



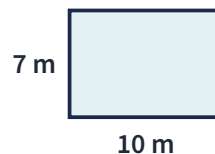
10



11

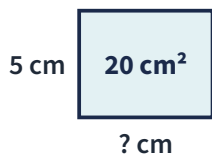


12

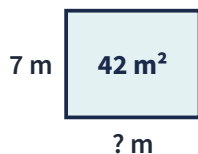


Find the missing side. 1 mark each.

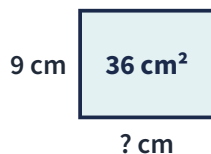
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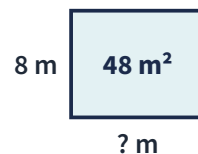
14



15



16



B

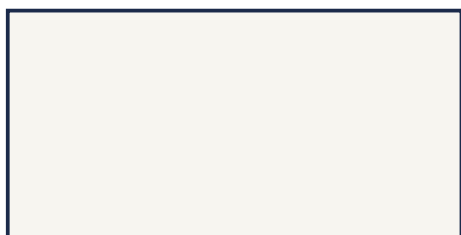
Practise *use the skill*

/ 21 marks

1

Use a ruler. Measure the length and the width of this rectangle in **centimetres**. Then find its area.

[2 marks]

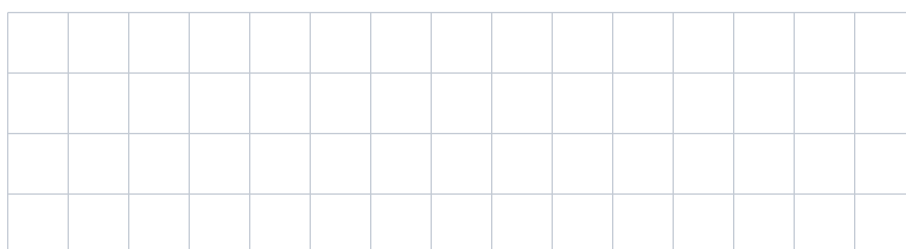


Answer: _____

2

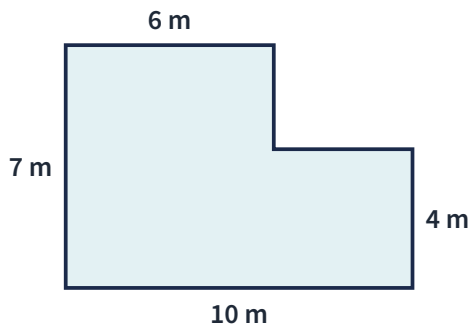
Each square stands for **1 cm²**. Draw **two different** rectangles that each have an area of **12 cm²**. Write the length and width of each.

[2 marks]



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- 3 This garden bed is made of two rectangles. Draw a line to split it into two rectangles. Find the missing sides, then the **total area**. [3 marks]

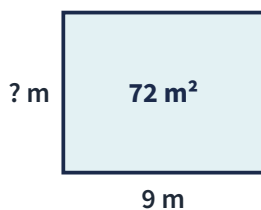


Answer: _____

- 4 A backyard lawn in Piara Waters is a rectangle **12 m** long and **8 m** wide. New turf costs **\$9 per square metre**. What is the area of the lawn, and how much will the turf cost? [2 marks]

Answer: _____

- 5 A school vegetable garden has an area of **72 m²**. One side is **9 m**. How long is the other side? What is the **perimeter**? [2 marks]



Answer: _____

- 6 Complete the table for these rectangles. [3 marks]

Length	Width	Area
6 cm	4 cm	
7 cm		56 cm ²
	5 cm	45 cm ²
12 cm		60 cm ²

Area of Rectangles · WA6MMGTW3

7 Draw a line to match each object to its most likely area.

[2 marks]

a postage stamp •	• about 60 m ²
a phone screen •	• about 6 cm ²
a classroom floor •	• about 420 m ²
a basketball court •	• about 100 cm ²

8 A rug covers part of this rectangle made of 1 cm² squares. What is the area of the whole rectangle? Explain how you know.

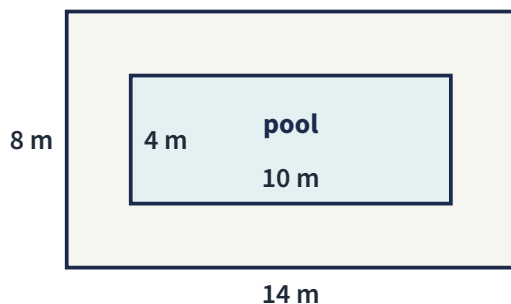
[2 marks]



Answer: _____

9 A pool **10 m** by **4 m** sits inside a paved area **14 m** by **8 m**. What area needs paving (the cream part)?

[3 marks]

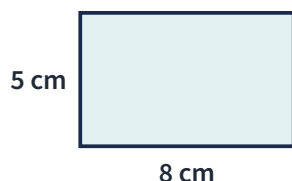


Answer: _____

C Think it through *explain your thinking*

/ 10 marks

- 1 Ella says the area of this rectangle is **26 cm²**. Do you agree with Ella? Explain her mistake. [2 marks]



- 2 **True or false?** “If you double the length **and** the width of a rectangle, its area doubles.” Use an example to explain. [2 marks]

- 3 **Always, sometimes or never true?** “A rectangle with a bigger perimeter has a bigger area.” Circle one and give examples. [2 marks]

Always

Sometimes

Never

- 4 Which rectangle is the **odd one out**? 3 cm × 8 cm, 4 cm × 6 cm, 2 cm × 12 cm, 5 cm × 5 cm. Explain. [2 marks]

- 5 Sort these rectangles (lengths in cm) into the table: 2 × 10, 6 × 5, 3 × 4, 7 × 4, 1 × 15, 4 × 5, 5 × 5. Explain where 5 × 5 goes. [2 marks]

	Perimeter more than 20 cm	Perimeter 20 cm or less
Area more than 24 cm ²		
Area 24 cm ² or less		

D**Challenge** *stretch yourself*

/ 9 marks

- 1 Find **all** the rectangles with whole-number sides and an area of **24 cm²**. Which one has the **smallest** perimeter? How do you know you have found them all? [3 marks]

Length	Width	Area	Perimeter
		24 cm ²	
		24 cm ²	
		24 cm ²	
		24 cm ²	
		24 cm ²	

- 2 A rectangle has a **perimeter of 30 cm**. Its length is **double** its width. Find its length, its width and its area. Show your working. [3 marks]

Answer: _____

- 3 Anh's garden is **9 m** by **4 m**. She wants a **square** garden with exactly the **same area**. How long is each side of the square? Which garden needs **less fencing**, and how much less? [3 marks]

Answer: _____

How did I go?Warm up ____ / 16 Practise ____ / 21 Think it through ____ / 10 Challenge ____ / 9 **Total ____ / 56**Want help with Year 6 maths? Our tutors make it click. **Book a free trial class at [edulift.com.au](https://www.edulift.com.au)**