

Year 5 – Autumn Block 5 – Perimeter and Area – Area of Rectangles

About This Resource:

This PowerPoint has been designed to support your teaching of this small step. It includes a starter activity and an example of each question from the Varied Fluency and Reasoning and Problem Solving resources also provided in this pack. You can choose to work through all examples provided or a selection of them depending on the needs of your class.

National Curriculum Objectives:

Mathematics Year 5: (5M7b) [Calculate and compare the area of rectangles \(including squares\), and including using standard units, square centimetres \(cm²\) and square metres \(m²\) and estimate the area of irregular shapes](#)

[More resources](#) which follow the same small steps as White Rose.

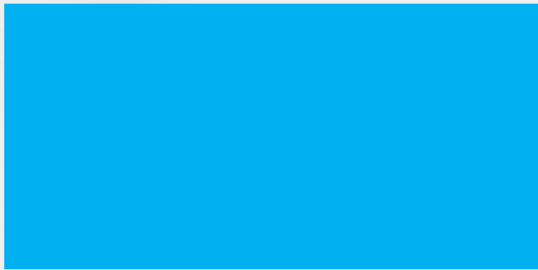
Did you like this resource? Don't forget to [review](#) it on our website.

Step 4: Area of Rectangles

Introduction

All these rectangles have a perimeter of 36cm^2 .

9cm



12cm



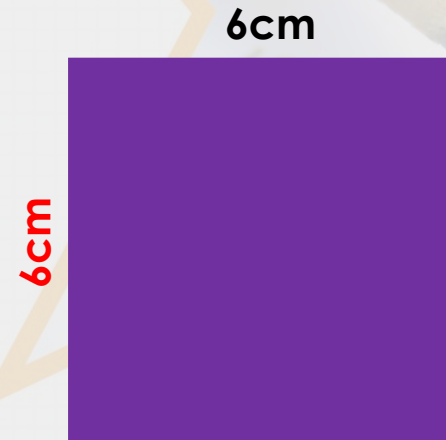
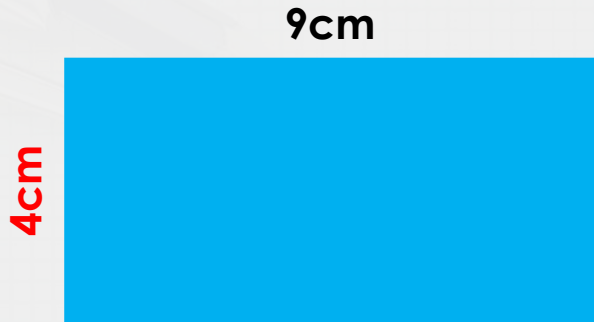
6cm



Find the missing lengths.

Introduction

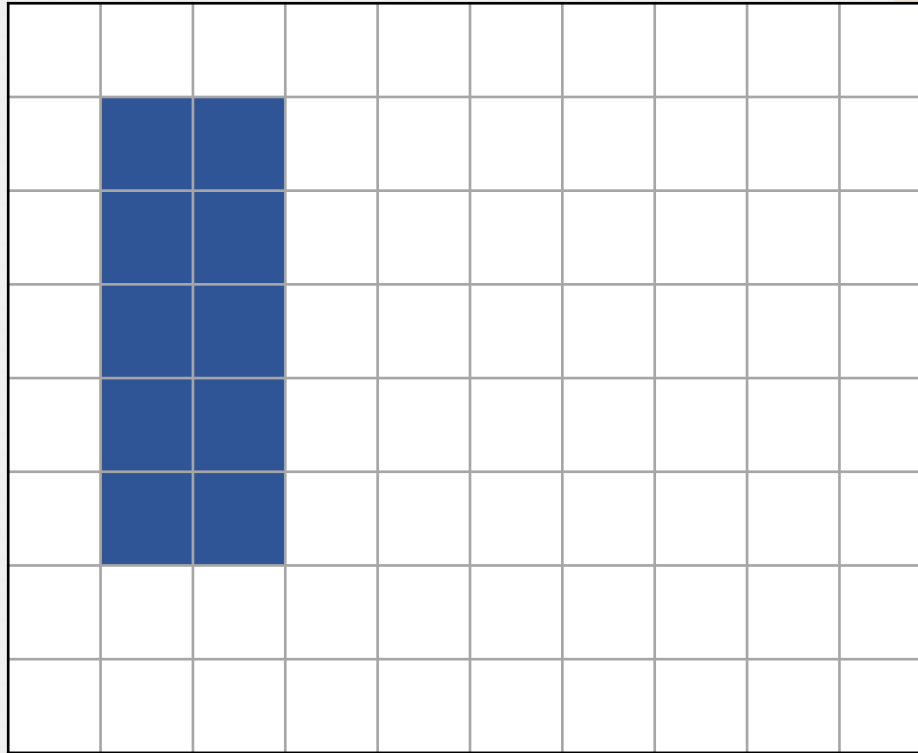
All these rectangles have a perimeter of 36cm^2 .



Find the missing lengths.

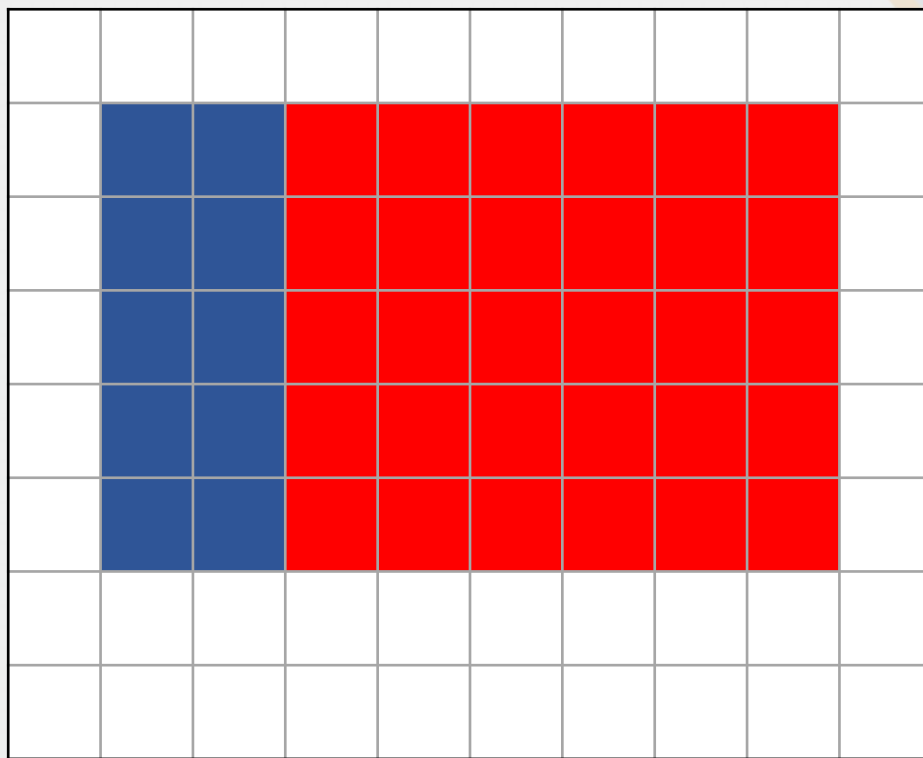
Varied Fluency 1

Complete the shape so that the rectangle has an area of 40cm^2 .



Varied Fluency 1

Complete the shape so that the rectangle has an area of 40cm^2 .



$$5\text{cm} \times 8\text{cm} = 40\text{cm}^2$$

Varied Fluency 2

The area of this rectangle is 24cm^2 . True or false?



Varied Fluency 2

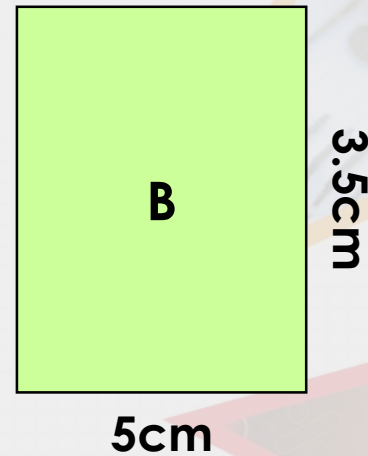
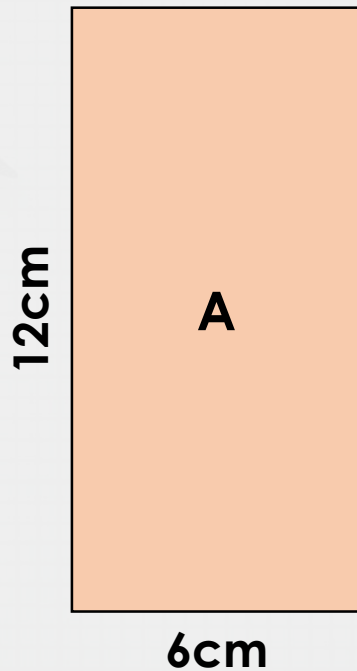
The area of this rectangle is 24cm^2 . True or false?



False, the correct answer is 32cm^2 .

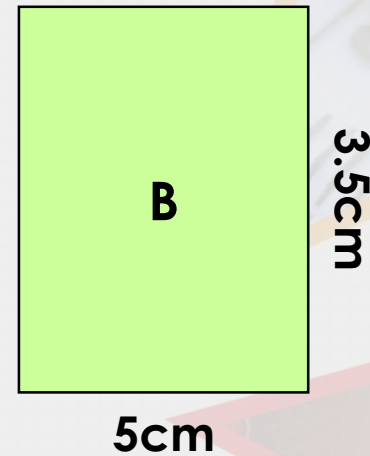
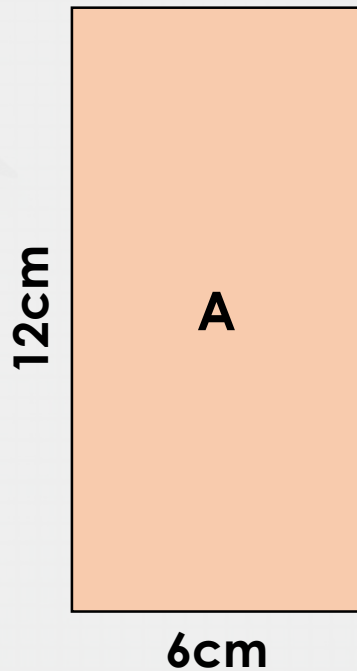
Varied Fluency 3

Find the area of these rectangles.



Varied Fluency 3

Find the area of these rectangles.

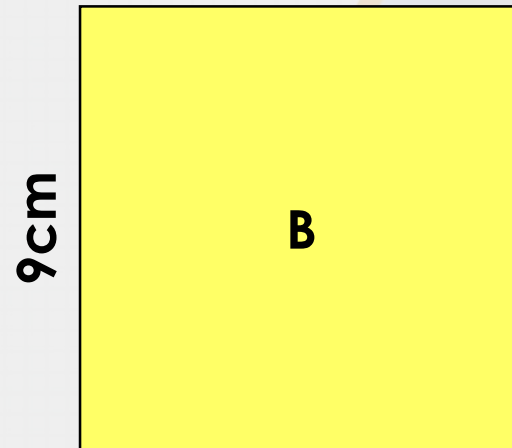
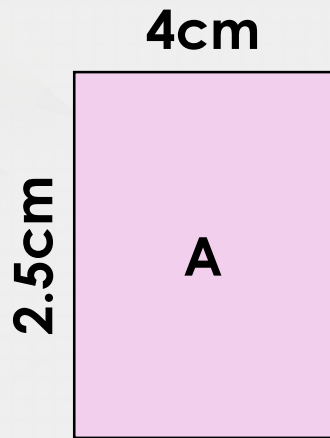


$$A = 12\text{cm} \times 6\text{cm} = 72\text{cm}^2$$

$$B = 5\text{cm} \times 3.5\text{cm} = 17.5\text{cm}^2$$

Varied Fluency 4

Match the shape to the correct area.



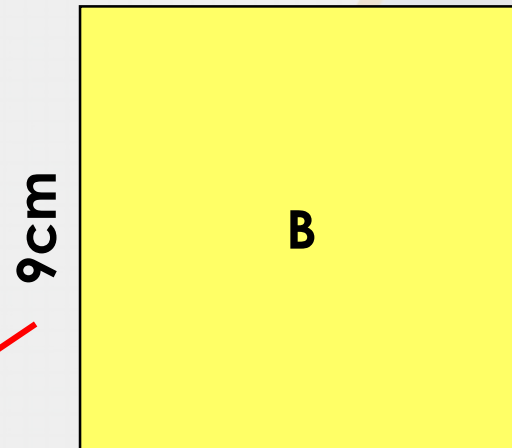
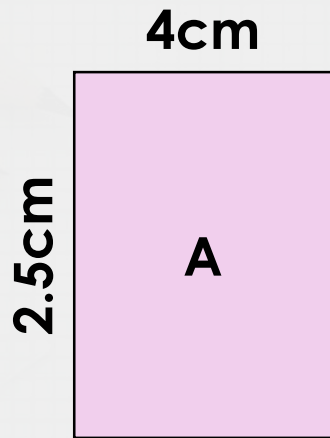
81cm^2

25.4cm^2

10cm^2

Varied Fluency 4

Match the shape to the correct area.



81cm^2

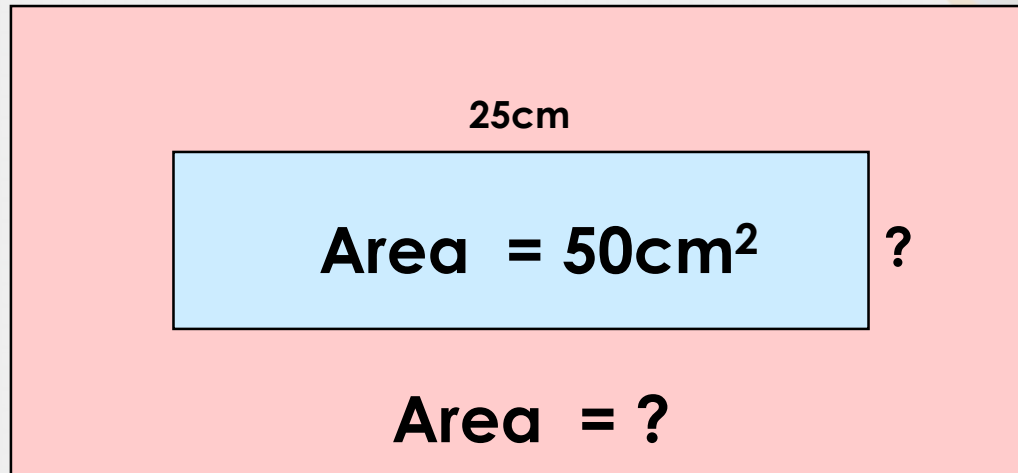
25.4cm^2

10cm^2

Problem Solving 1

Using the information, calculate the area of the larger rectangle.

?

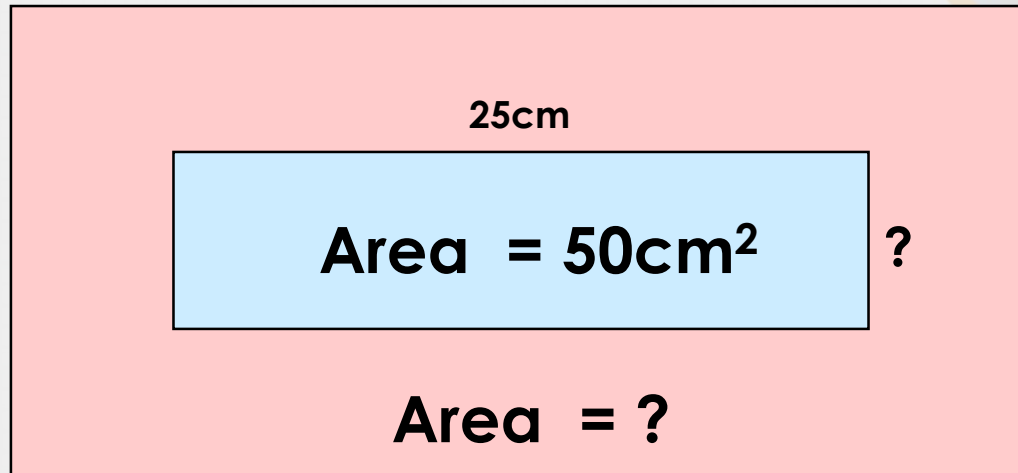


The larger rectangle has sides that are twice as long as the smaller one.

Problem Solving 1

Using the information, calculate the area of the larger rectangle.

?

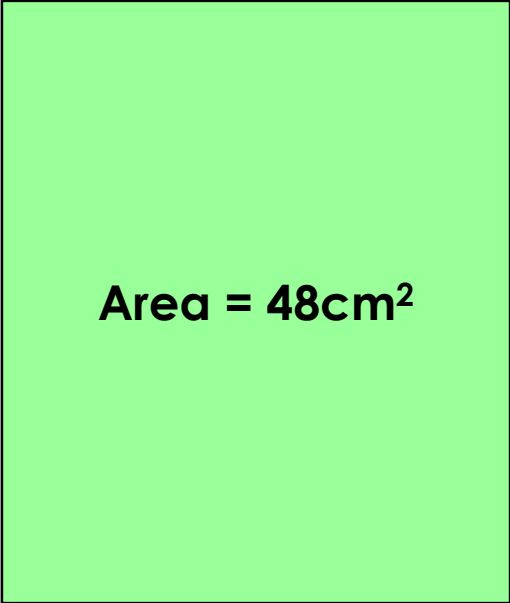


The larger rectangle has sides that are twice as long as the smaller one.

The smaller rectangle has sides of $25\text{cm} \times 2\text{cm}$.
The larger rectangle has sides of $50\text{cm} \times 4\text{cm}$.
Area of larger rectangle = 200cm^2 .

Problem Solving 2

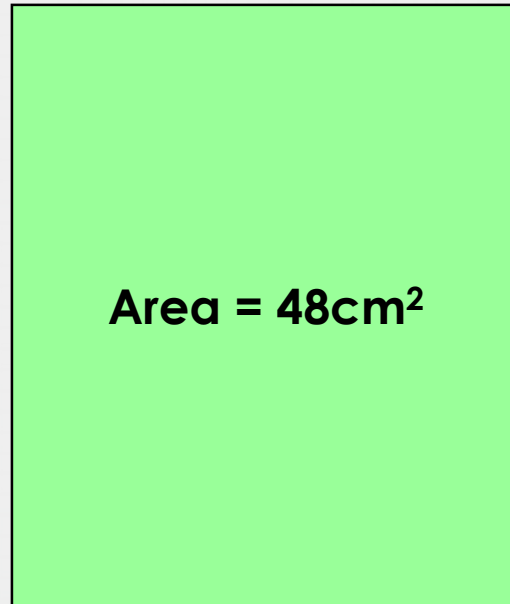
**This rectangle has an area of 48cm^2 . What could the dimensions be?
Include a range of possible answers.**



Area = 48cm^2

Problem Solving 2

**This rectangle has an area of 48cm^2 . What could the dimensions be?
Include a range of possible answers.**



**Various answers, for example:
 $8\text{cm} \times 6\text{cm}$, $24\text{cm} \times 2\text{cm}$, $12\text{cm} \times 4\text{cm}$**

Reasoning 1

Max says,



The area of this rectangle is 36cm^2 .



Explain Max's mistake.

Reasoning 1

Max says,



The area of this rectangle is 36cm^2 .



Explain Max's mistake.

Max has realised that the shape is a square, but...

Reasoning 1

Max says,



The area of this rectangle is 36cm^2 .



Explain Max's mistake.

Max has realised that the shape is a square, but he has added together all the sides instead of multiplying them.

The correct answer is $9\text{cm} \times 9\text{cm} = 81\text{cm}^2$.