

Varied Fluency

Step 3: Area of Rectangles

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](#)

Differentiation:

Developing Questions to support calculating the area of rectangles by counting squares and begin to use the correct formula. Whole numbers only.

Expected Questions to support calculating the area of rectangles by using the correct formula. Includes some use of decimals and rounding to estimate.

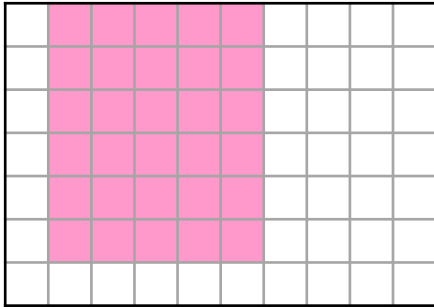
Greater Depth Questions to support calculating the area of rectangles using the correct formula. Includes some use of decimals, rounding to estimate and conversion of units.

More [Year 5 Area and Perimeter](#) resources.

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

Area of Rectangles

1a. Complete the shape to make a rectangle with an area of 54cm^2 .



Label the length and width of the rectangle.

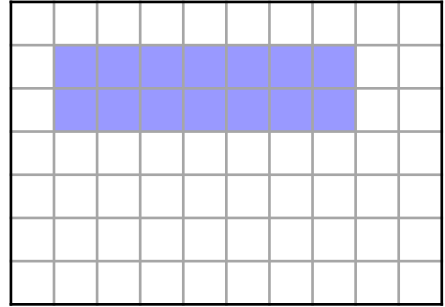


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VF

Area of Rectangles

1b. Complete the shape to make a rectangle with an area of 42cm^2 .



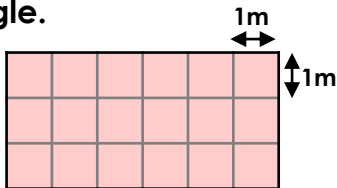
Label the length and width of the rectangle.



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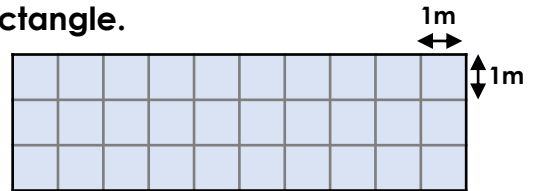
2a. Count the squares to find the area of the rectangle.



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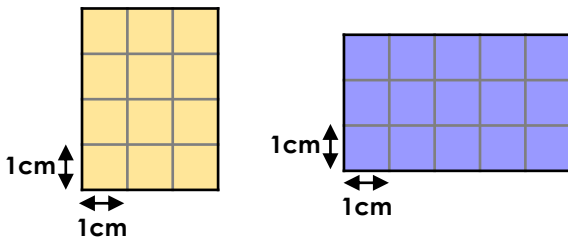
2b. Count the squares to find the area of the rectangle.



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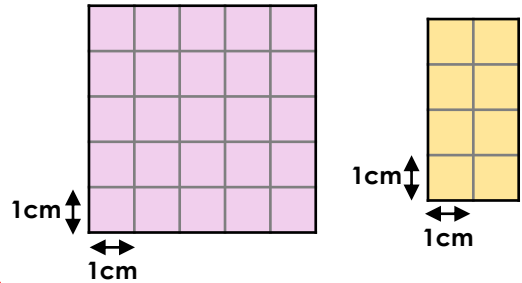
3a. Find the total area of both rectangles.



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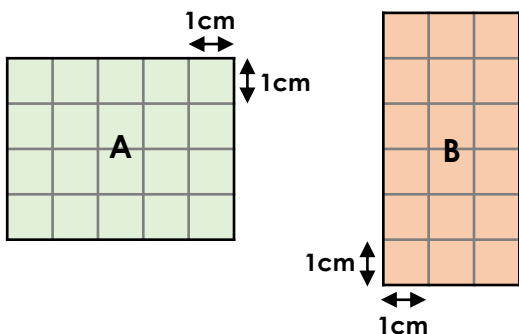
3b. Find the total area of both rectangles.



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4a. Match the shape to the correct area.



20cm^2

18cm^2

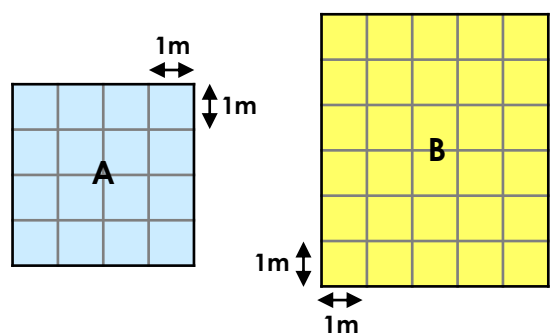
21cm^2



Not to scale

VF

4b. Match the shape to the correct area.



30m^2

16m^2

25m^2

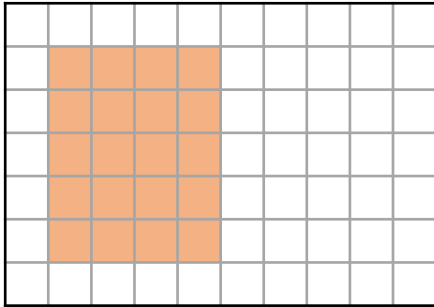


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Area of Rectangles

5a. Complete the shape to make a rectangle with an area of 40cm^2 .



Write down the calculation used to show the length and width of the rectangle.

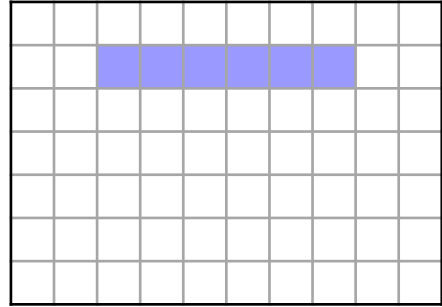


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Area of Rectangles

5b. Complete the shape to make a rectangle with an area of 36cm^2 .



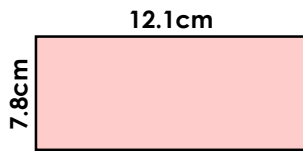
Write down the calculation used to show the length and width of the rectangle.



Not to scale

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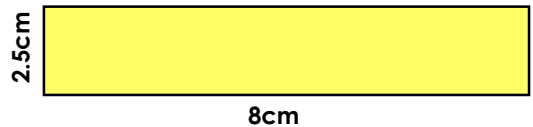
6a. Calculate the estimated area of the rectangle.



Not to scale

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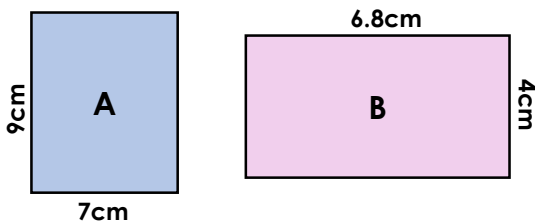
6b. Calculate the estimated area of the rectangle.



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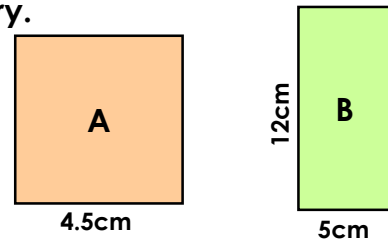
7a. Calculate the total area of both rectangles. Round estimate where necessary.



Not to scale

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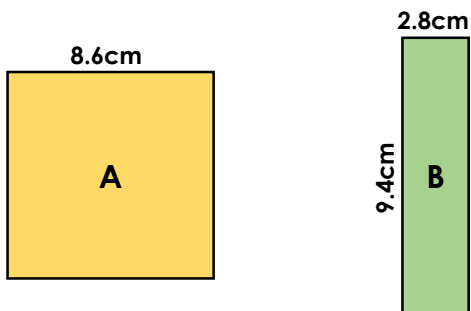
7b. Calculate the total area of both rectangles. Round estimate where necessary.



Not to scale

VF

8a. Match the shape to the correct estimated area.



27cm^2

64cm^2

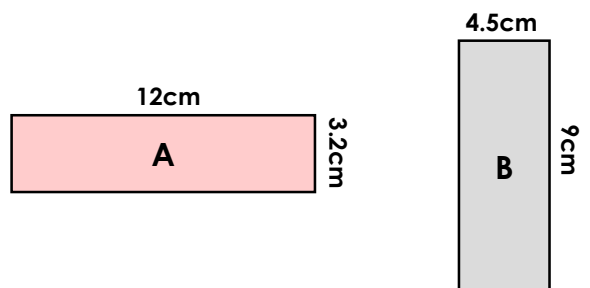
81cm^2



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8b. Match the shape to the correct estimated area.



45cm^2

36cm^2

48cm^2

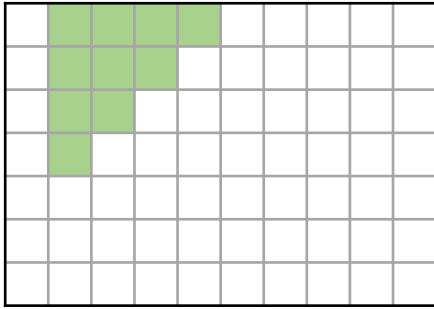


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Area of Rectangles

9a. Complete the shape to make a rectangle with an area of 56cm^2 .



Write down the calculation used to show the length and width of the rectangle.

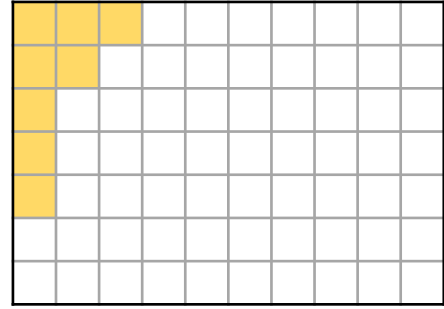


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Area of Rectangles

9b. Complete the shape to make a rectangle with an area of 49cm^2 .



Write down the calculation used to show the length and width of the rectangle.



Not to scale

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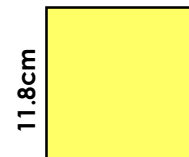
10a. Calculate the estimated area of the rectangle. Give your answer in cm .



Not to scale

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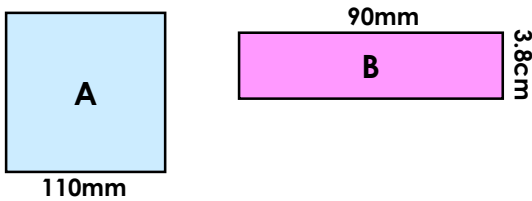
10b. Calculate the estimated area of the square. Give your answer in mm .



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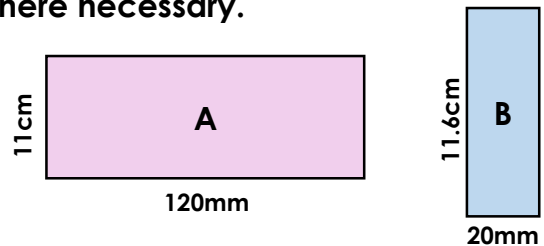
11a. Calculate the total area of both shapes in cm^2 . Round to estimate where necessary.



Not to scale

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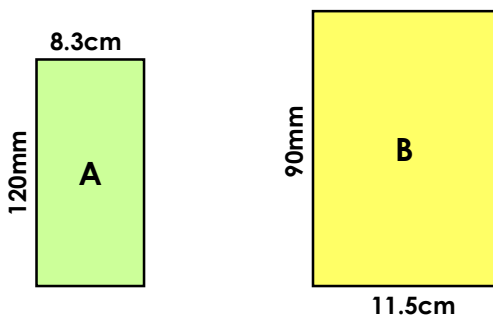
11b. Calculate the total area of both rectangles in cm^2 . Round to estimate where necessary.



Not to scale

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12a. Match the shape to the correct estimated area.



96cm^2

96mm^2

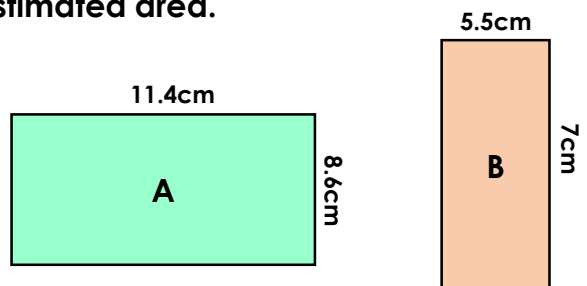
108cm^2



Not to scale

VF

12b. Match the shape to the correct estimated area.



42cm^2

88cm^2

$9,900\text{mm}^2$



Not to scale

VF

Varied Fluency Area of Rectangles

Developing

- 1a. Children complete the shape to the dimensions $9\text{cm} \times 6\text{cm}$ (24 more squares).
2a. $6\text{cm} \times 3\text{cm} = 18\text{cm}^2$
3a. A: 12cm^2 ; B: 15cm^2 ; total area: 27cm^2
4a. A = 20cm^2 , B = 18cm^2

Expected

- 5a. Children complete the shape to the dimensions $8\text{cm} \times 5\text{cm}$ (20 more squares).
6a. $12\text{cm} \times 8\text{cm} = 96\text{cm}^2$
7a. A: $7\text{cm} \times 9\text{cm} = 63\text{cm}^2$; B: $7\text{cm} \times 4\text{cm} = 28\text{cm}^2$; total area: $63\text{cm}^2 + 28\text{cm}^2 = 91\text{cm}^2$
8a. A = 81cm^2 , B = 27cm^2

Greater Depth

- 9a. Children complete the shape to the dimensions $8\text{cm} \times 7\text{cm}$ (46 more squares).
10a. $12\text{cm} \times 7\text{cm} = 84\text{cm}^2$
11a. A: $11\text{cm} \times 11\text{cm} = 121\text{cm}^2$; B: $9\text{cm} \times 4\text{cm} = 36\text{cm}^2$; total area: $121\text{cm}^2 + 36\text{cm}^2 = 157\text{cm}^2$
12a. A = 96cm^2 , B = 108cm^2

Varied Fluency Area of Rectangles

Developing

- 1b. Children complete the shape to the dimensions $7\text{cm} \times 6\text{cm}$ (28 more squares).
2b. $3\text{cm} \times 10\text{cm} = 30\text{cm}^2$
3b. A: 25cm^2 ; B: 8cm^2 ; total area: 33cm^2
4b. A = 16m^2 , B = 30m^2

Expected

- 5b. Children complete the shape to the dimensions $6\text{cm} \times 6\text{cm}$ (30 more squares).
6b. $8\text{cm} \times 3\text{cm} = 24\text{cm}^2$
7b. A: $5\text{cm} \times 5\text{cm} = 25\text{cm}^2$; B: $12\text{cm} \times 5\text{cm} = 60\text{cm}^2$; total area: $25\text{cm}^2 + 60\text{cm}^2 = 85\text{cm}^2$
8b. A = 36cm^2 , B = 45cm^2

Greater Depth

- 9b. Children complete the shape to the dimensions $7\text{cm} \times 7\text{cm}$ (41 more squares).
10b. $120\text{mm} \times 120\text{mm} = 14,400\text{mm}^2$
11b. A: $12\text{cm} \times 11\text{cm} = 132\text{cm}^2$; B: $2\text{cm} \times 12\text{cm} = 24\text{cm}^2$; total area: $144\text{cm}^2 + 24\text{cm}^2 = 156\text{cm}^2$
12b. A = $9,900\text{mm}^2$, B = 42cm^2