

Varied Fluency

Step 4: Area of Compound Shapes

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 finding the area of compound shapes involving whole measurements of the same unit (cm or m).

Expected Questions to support finding the area of compound shapes involving whole measurements of different units (mm and cm; cm and m).

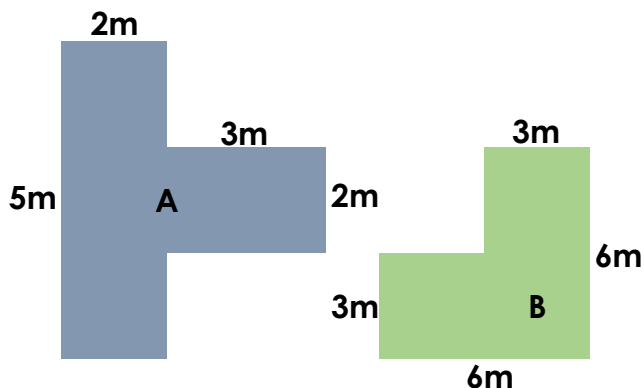
Greater Depth Questions to support finding the area of compound shapes involving measurements of different units (mm and cm; cm and m) up to 1 decimal place.

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

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

Area of Compound Shapes

1a. Find the area of the shapes. Which shape has the larger area?

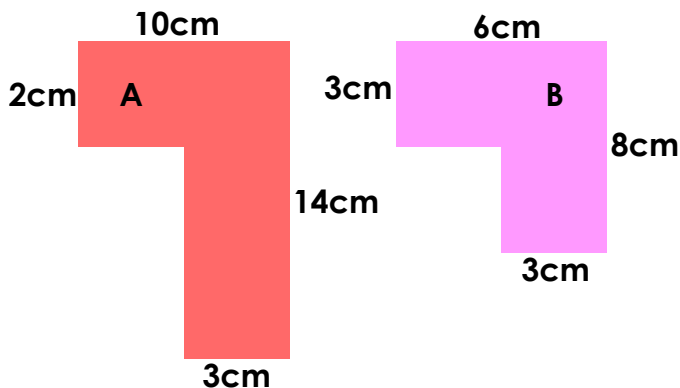


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Area of Compound Shapes

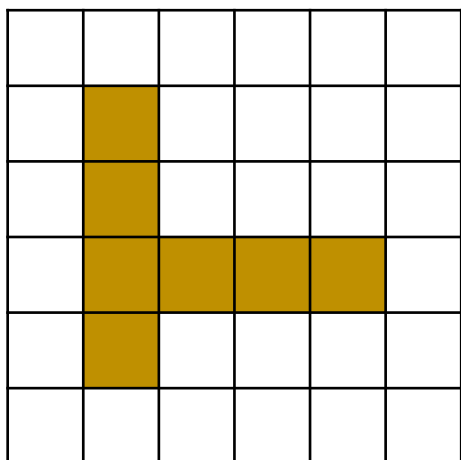
1b. Find the area of the shapes. Which shape has the larger area?



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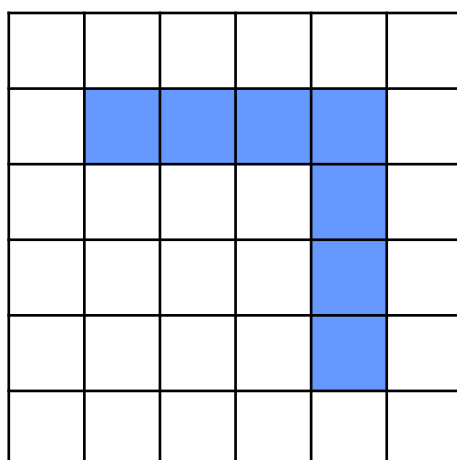
2a. The side of each square measures 3m. What is the area of the shape?



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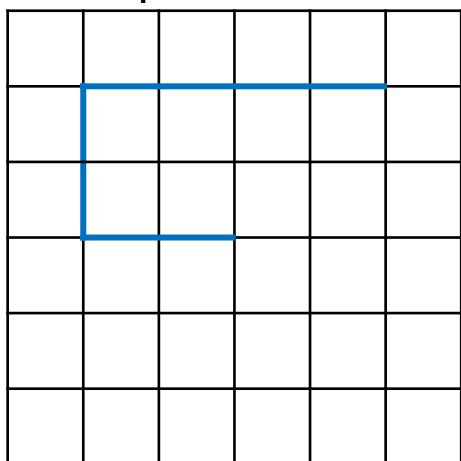
2b. The side of each square measures 2m. What is the area of the shape?



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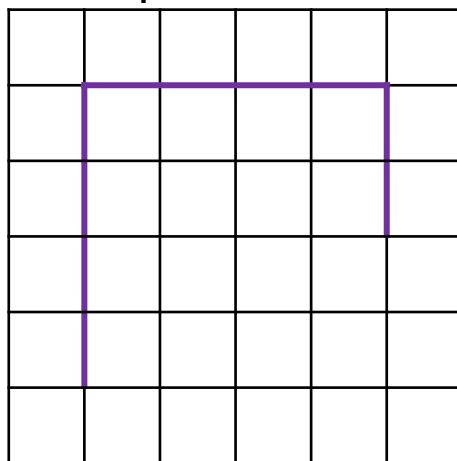
3a. Complete the compound shape below so that it has an area of 12cm^2 . The side of each square is 1cm.



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3b. Complete the compound shape below so that it has an area of 14cm^2 . The side of each square is 1cm.



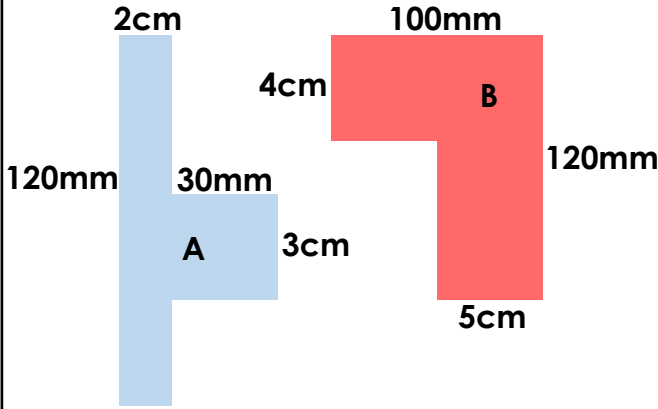
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Area of Compound Shapes

Area of Compound Shapes

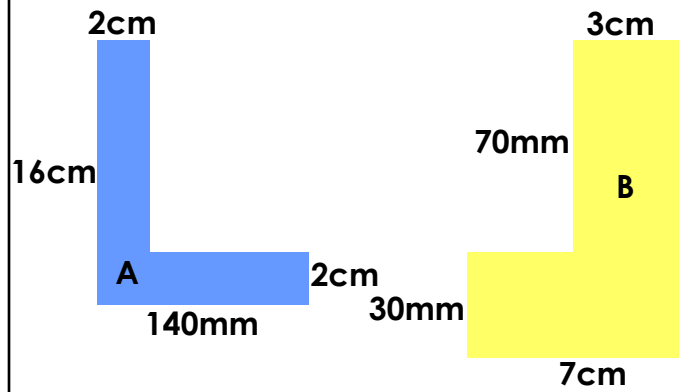
4a. Find the area of the shapes. Which shape has the larger area?



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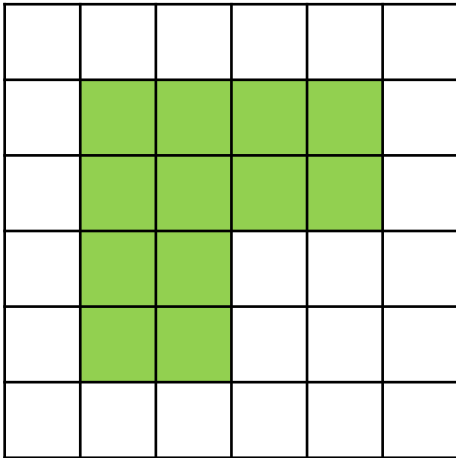
4b. Find the area of the shapes. Which shape has the larger area?



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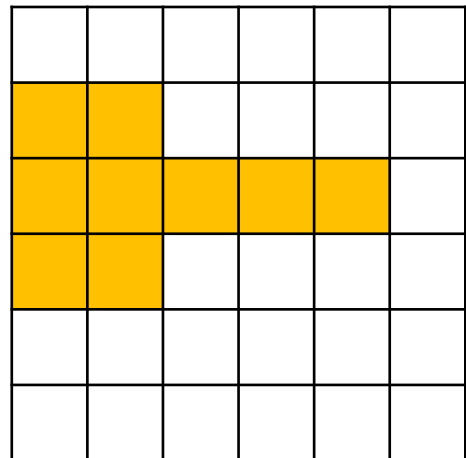
5a. The side of each square measures 30mm. What is the area of the shape in cm^2 ?



Not to scale

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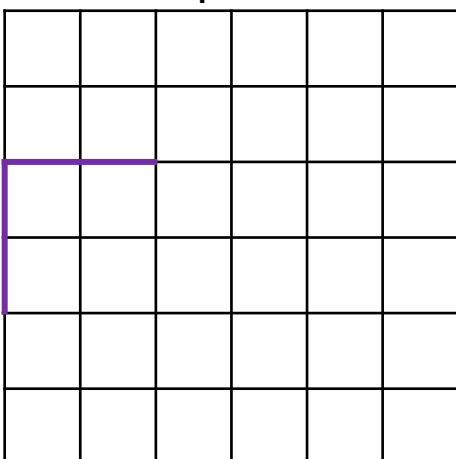
5b. The side of each square measures 20mm. What is the area of the shape in cm^2 ?



Not to scale

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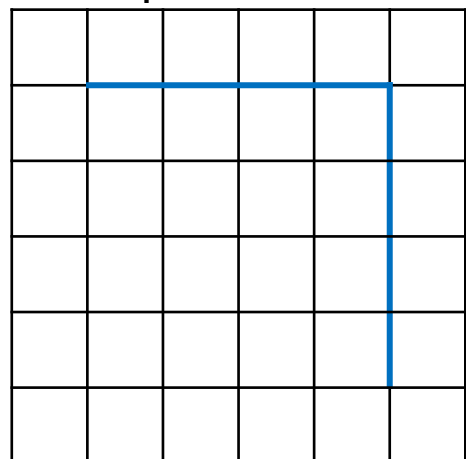
6a. Complete the compound shape below so that it has an area of 72cm^2 . The side of each square is 30mm.



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6b. Complete the compound shape below so that it has an area of 48cm^2 . The side of each square is 20mm.

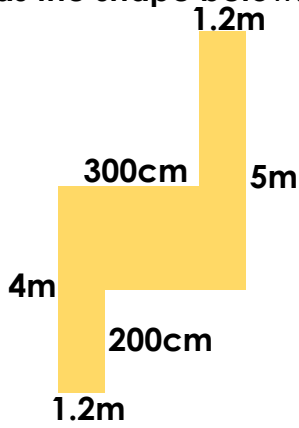


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Area of Compound Shapes

7a. Draw a different compound shape made up of three rectangles with the same area as the shape below.



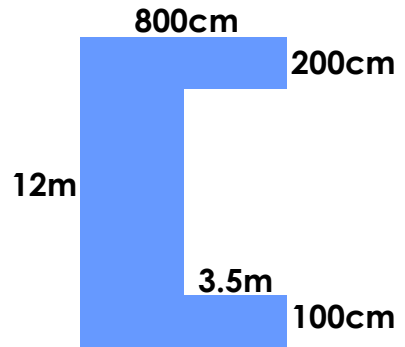
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Area of Compound Shapes

7b. Draw a different compound shape made up of three rectangles with the same area as the shape below.

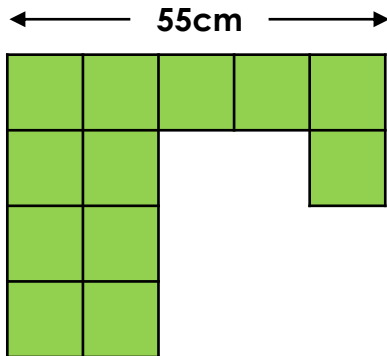


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8a. Calculate the area of the compound shape below in cm^2 .

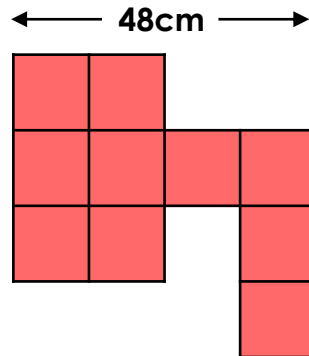


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8b. Calculate the area of the compound shape below in m^2 .

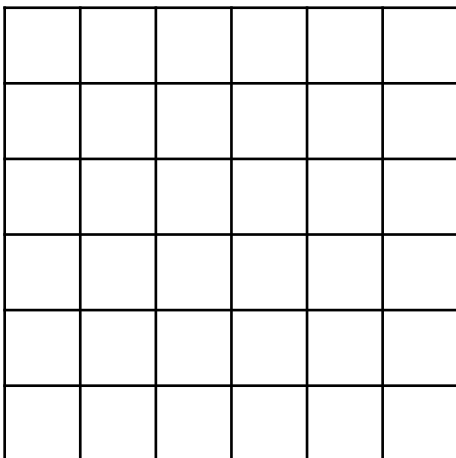


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9a. Draw a compound shape with an area of 40.5cm^2 where the side of each square equals 15mm .

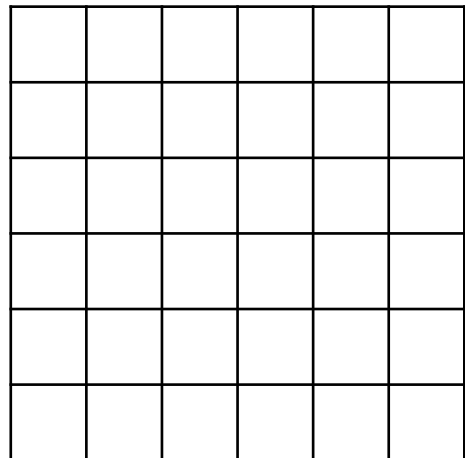


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9b. Draw a compound shape with an area of 750mm^2 where the side of each square equals 2.5cm .



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Varied Fluency Area of Compound Shapes

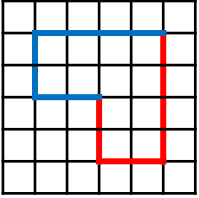
Developing

1a. $A = 16\text{m}^2$; $B = 27\text{m}^2$

B has the larger area.

2a. 63m^2

3a. Various answers, for example:



Accept any compound shape with an area of 12cm^2 (12 squares).

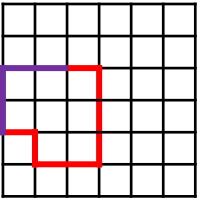
Expected

4a. $A = 33\text{cm}^2$; $B = 80\text{cm}^2$

B has the larger area.

5a. 108cm^2

6a. Various answers, for example:



Accept any compound shape with an area of 72cm^2 . (8 squares)

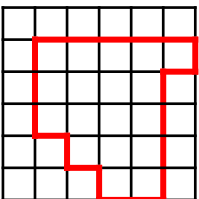
Greater Depth

7a. Accept any compound shape made up of three rectangles with an area of 14.4m^2 . For example, a compound shape made of the following rectangles:

$1.2\text{cm} \times 3\text{cm}$, $1.2\text{cm} \times 7\text{cm}$, $1.2\text{cm} \times 2\text{cm}$.

8a. $1,452\text{cm}^2$

9a. Various answers, for example:



Accept any compound shape with an area of 40.5cm^2 . (18 squares)

Varied Fluency Area of Compound Shapes

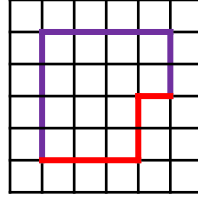
Developing

1b. $A = 56\text{cm}^2$; $B = 33\text{cm}^2$

A has the larger area.

2b. 28m^2

3b. Various answers, for example:



Accept any compound shape with an area of 14cm^2 (14 squares).

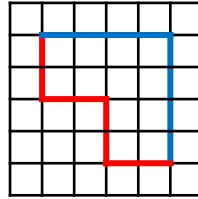
Expected

4b. $A = 56\text{cm}^2$; $B = 42\text{cm}^2$

A has the larger area.

5b. 36cm^2

6b. Various answers, for example:



Accept any compound shape with an area of 48cm^2 . (12 squares)

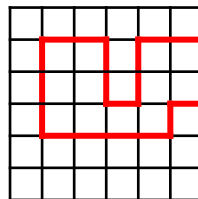
Greater Depth

7b. Accept any compound shape made up of three rectangles with an area of 64.5m^2 . For example, a compound shape made of the following rectangles:

$2.5\text{m} \times 5\text{m}$, $6\text{m} \times 6\text{m}$, $4\text{m} \times 4\text{m}$.

8b. 120cm^2

9b. Various answers, for example:



Accept any compound shape with an area of 750mm^2 . (12 squares)