

Homework/Extension

Step 1: Shapes Same Area

National Curriculum Objectives:

Mathematics Year 6: (6M7a) [Recognise that shapes with the same areas can have different perimeters and vice versa](#)

Differentiation:

Questions 1, 4 and 7 (Varied Fluency)

Developing Draw a rectilinear shape with the same area as the shape presented. Includes a square made up of whole squares.

Expected Draw a rectilinear shape with the same area as the shape presented. Includes a rectilinear shape made up of whole squares.

Greater Depth Draw a rectilinear shape with the same area as the shape presented. Includes a rectilinear shape made up of whole and half squares.

Questions 2, 5 and 8 (Varied Fluency)

Developing Match the shapes to the correct area. Whole numbers only, using known multiplication facts within 12×12 .

Expected Match the shapes to the correct area. Whole numbers and decimals up to 1dp (0.5) are used for the length and width of the sides.

Greater Depth Identify the shapes with the same area and determine the value of that area. Whole numbers and decimals to 2 dp are used for the length and width of the sides.

Questions 3, 6 and 9 (Reasoning and Problem Solving)

Developing Sort the shapes into the table by calculating the area. Whole numbers only, using known multiplication facts within 12×12 .

Expected Sort the shapes into the table by calculating the area. Whole numbers and decimals up to 1dp (0.5) are used for the length and width of the sides.

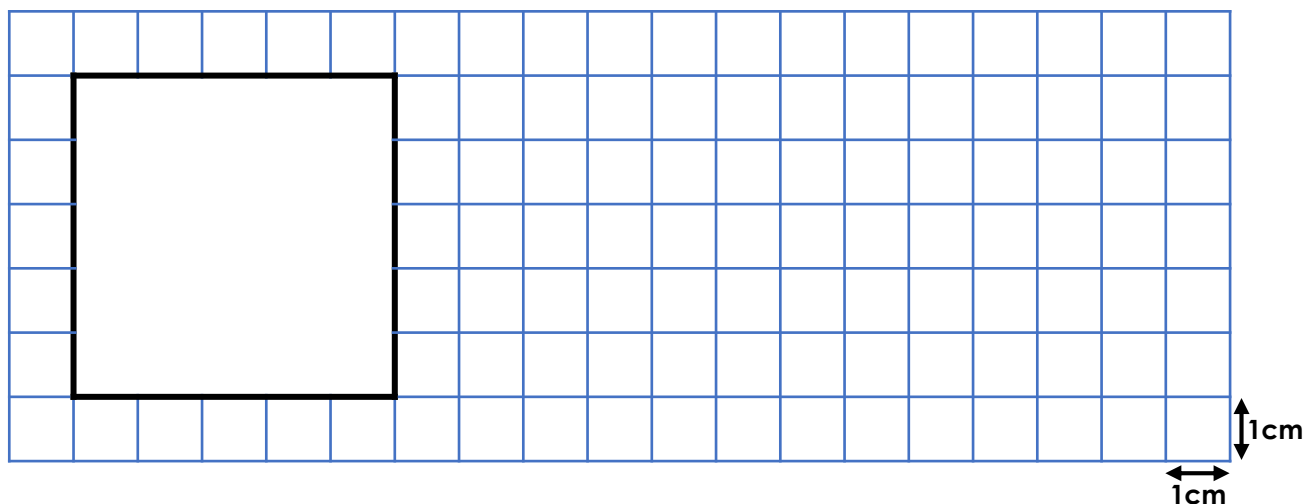
Greater Depth Sort the shapes into the table by calculating the area. Whole numbers and decimals to 2 dp are used for the length and width of the sides. Includes some conversions between cm and mm.

More [Year 6 Perimeter, Area and Volume](#) resources.

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

Shapes Same Area

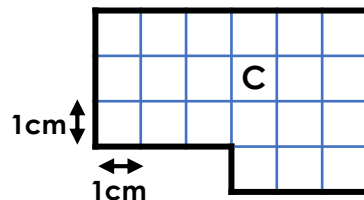
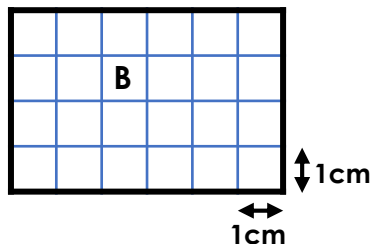
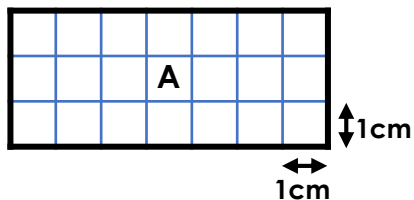
1. Draw a different shape with the same area as the one below.



not to scale

VF
HW/Ext

2. Match these shapes to their area.



24cm²

21cm²

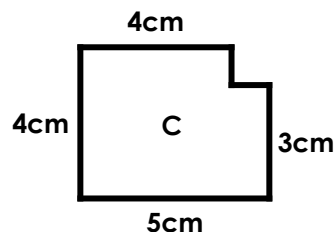


not to scale

VF
HW/Ext

3. Leah has sorted shapes into a table.

Area is 18cm ²	Area is not 18cm ²
<p style="text-align: center;">A</p>	
<p style="text-align: center;">B</p>	



Is she correct? Prove it.

Where would shape C go in the table?

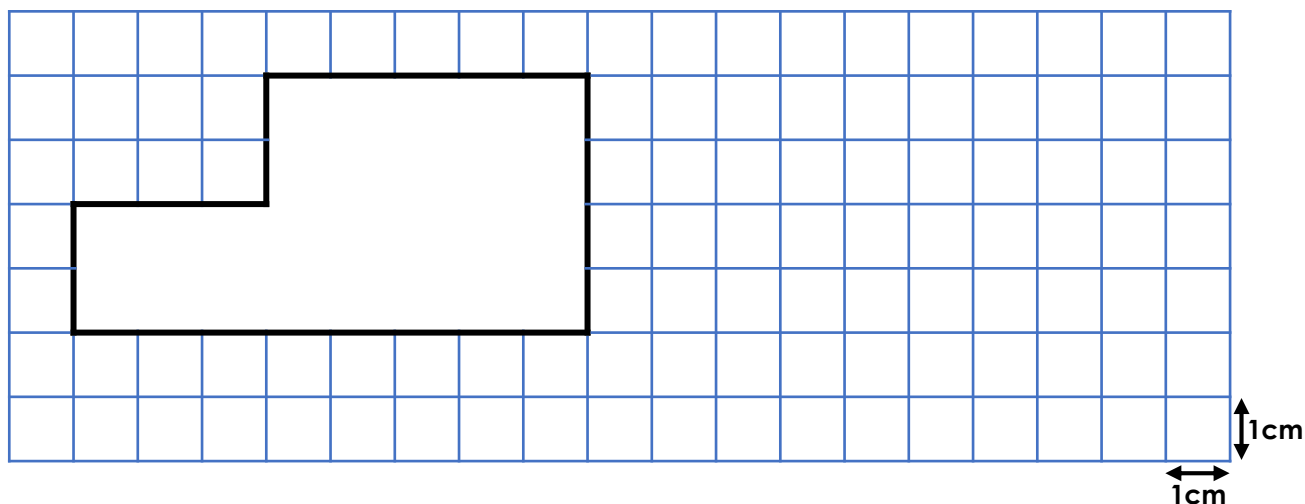


not to scale

RPS
HW/Ext

Shapes Same Area

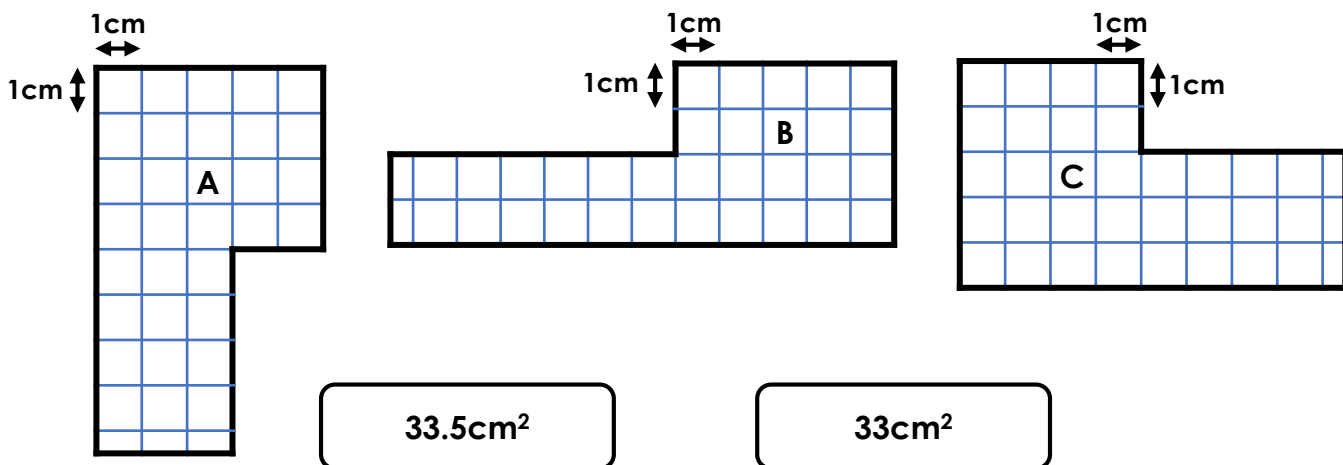
4. Draw a different shape with the same area as the one below.



not to scale

VF
HW/Ext

5. Match these shapes to their area.

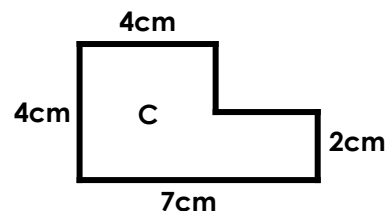


not to scale

VF
HW/Ext

6. Justin has sorted shapes into a table.

Area is 22cm^2	Area is not 22cm^2
<p style="text-align: center;">A</p>	<p style="text-align: center;">B</p>



Is he correct? Prove it.

Where would shape C go in the table?

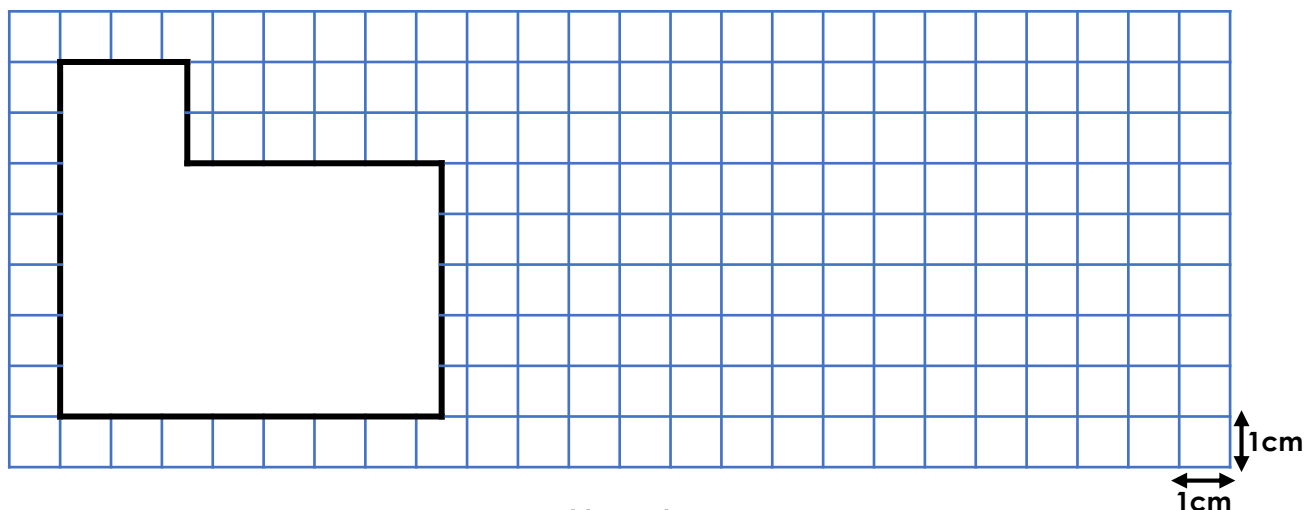


not to scale

RPS
HW/Ext

Shapes Same Area

7. Draw a different shape with the same area as the one below.

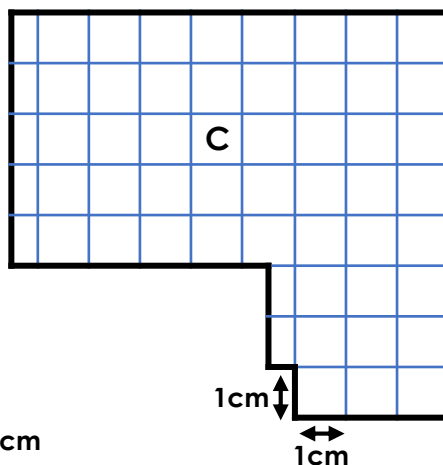
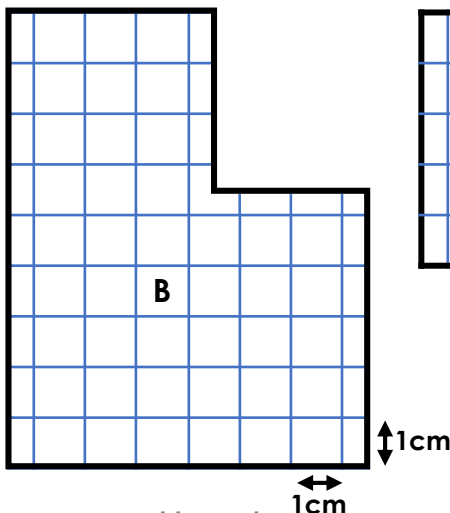
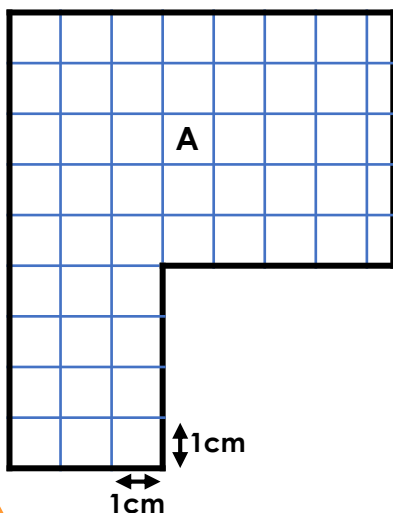


not to scale



VF
HW/Ext

8. Tick the two shapes that have the same area. What is their area?



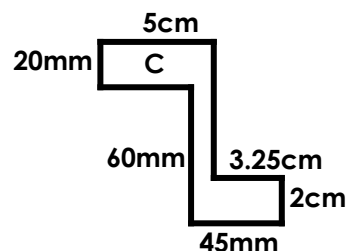
not to scale



VF
HW/Ext

9. Aleena has sorted shapes into a table.

Area is 24cm^2	Area is not 24cm^2
<p style="text-align: center;">A</p>	<p style="text-align: center;">B</p>



Is she correct? Prove it.

Where would shape C go in the table?

not to scale

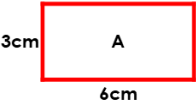

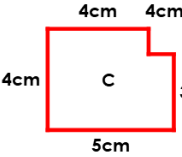


RPS
HW/Ext

Homework/Extension Shapes Same Area




Developing

1. Various answers providing the total area is 25cm^2 .
2. A. 21cm^2 ; B. 24cm^2 ; C. 21cm^2
3. Shape A is in the correct place; shape B is not as it has an area of 16cm^2 . Shape C has an area of 19cm^2 .

Area is 18cm^2	Area is not 18cm^2
 <p style="text-align: center;">A</p>	 <p style="text-align: center;">B</p>  <p style="text-align: center;">C</p>

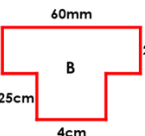
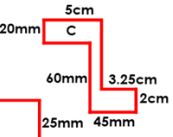
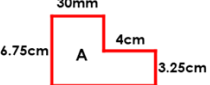
Expected

4. Various answers, providing the total area is 26cm^2 .
5. A. 33.5cm^2 ; B. 33cm^2 ; C. 33.5cm^2
6. Justin is correct. Shape A = 22cm^2 . Shape B is 25cm^2 . Shape C has an area of 22cm^2 , so should be placed in the column labelled 'Area is 22cm^2 '.

Area is 22cm^2	Area is not 22cm^2
 <p style="text-align: center;">A</p>  <p style="text-align: center;">C</p>	 <p style="text-align: center;">B</p>

Greater Depth

7. Various answers, providing the total area is 42.5cm^2 .
8. B and C. 52.5cm^2 ; A. 49.5cm^2
9. Shapes A and B are in the wrong columns. Shape A has an area of 23.5cm^2 not 24cm^2 ; Shape B has an area of 24cm^2 . Shape C has an area of 24cm^2 , so needs to go in the column labelled 'Area is 24cm^2 '.

Area is 24cm^2	Area is not 24cm^2
 <p style="text-align: center;">B</p>  <p style="text-align: center;">C</p>	 <p style="text-align: center;">A</p>