Area of Compound Shapes

Monday 27th April 2020

As part of your maths today, please complete Times tables grid 2.

L.O. To calculate the area of compound shapes
1. To explain perimeter and area
2. To identify how to split a compound shape into 2 separate shapes
3. Calculate the area of the shapes – individually and as a total
4. Explain answers
5. Solve problems

Remind yourself of the work you did last week on perimeter and area.
Then, work through the slides.

Today is all about calculating the area of compound shapes – when two (or more) shapes have been put together.
Always look to see how the shape can easily be broken down into rectangles and/or squares.
You then just need to use what you already know to calculate the areas of the individual shapes, then add the values together.

There are answers following each slide.

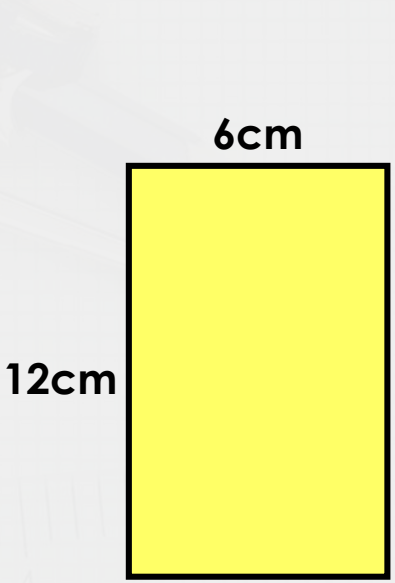
When you have worked through this, there are VF and RPS sheets to have a go at – remember to choose D, E or GD, as you would in class to complete and either the A or B side of each sheet.

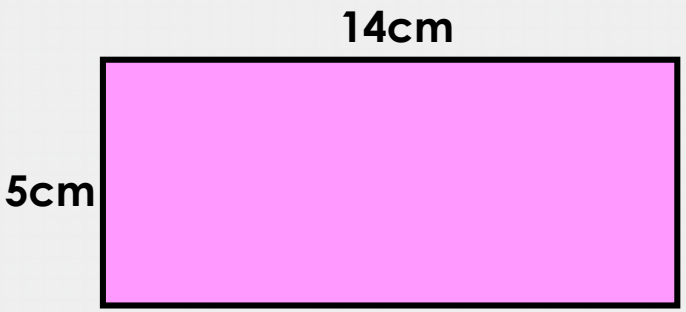
Always do VF before RPS.

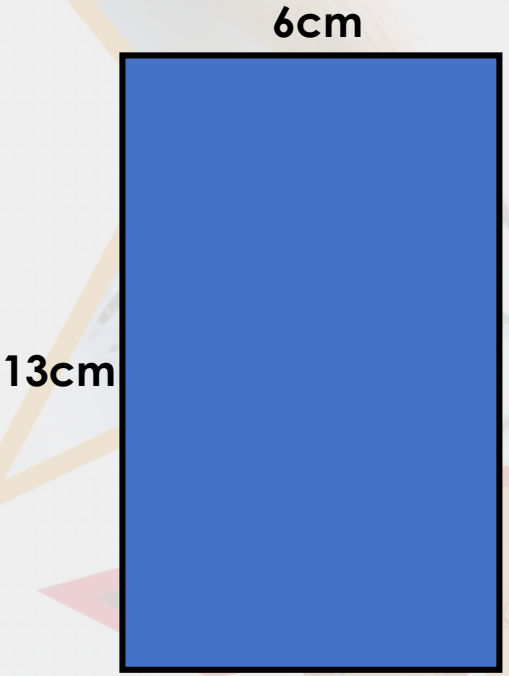
There are answers at the end of the document for when you finish.

Introduction

Match the rectangle to the area.



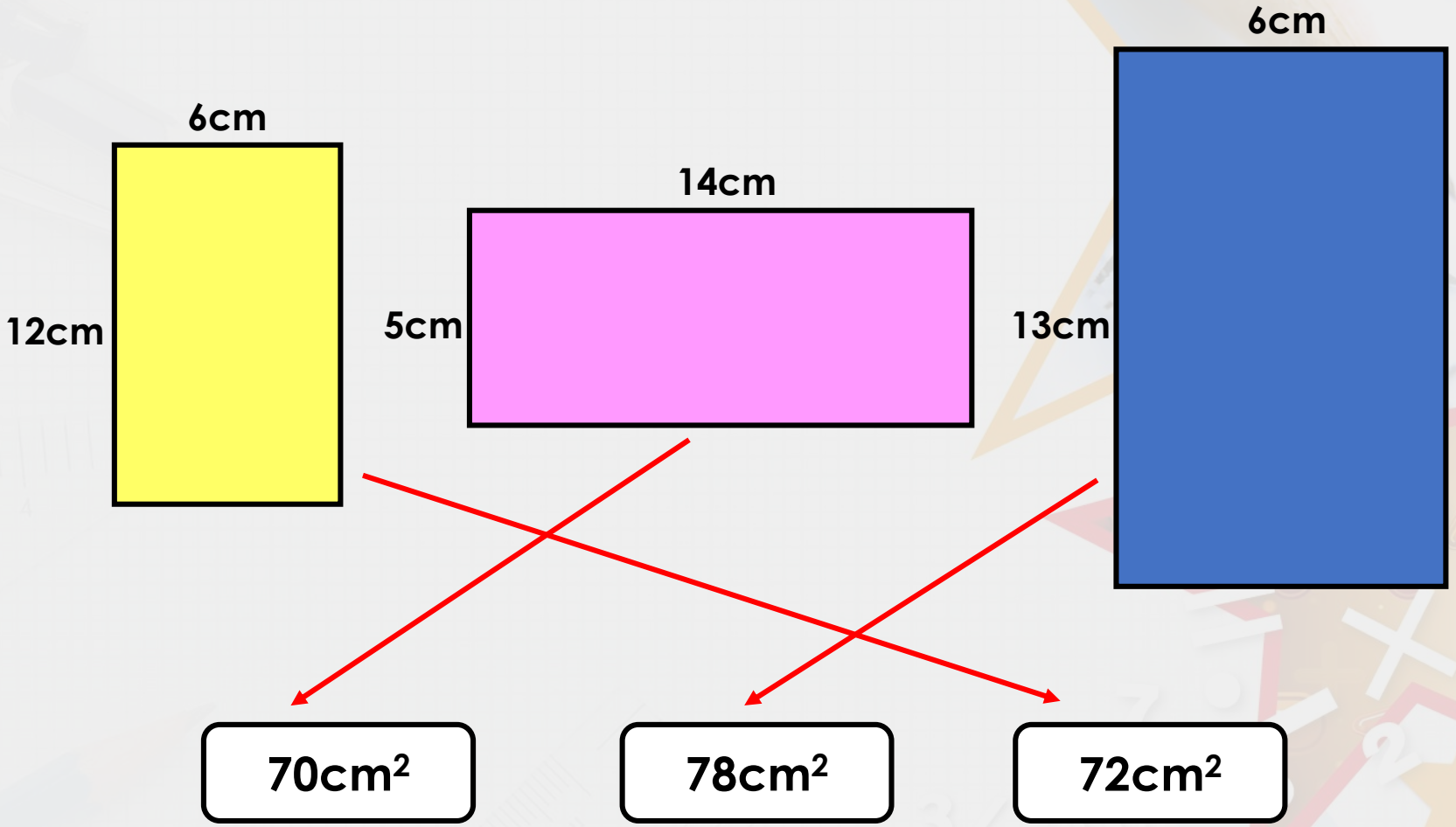




$70cm^2$	$78cm^2$	$72cm^2$

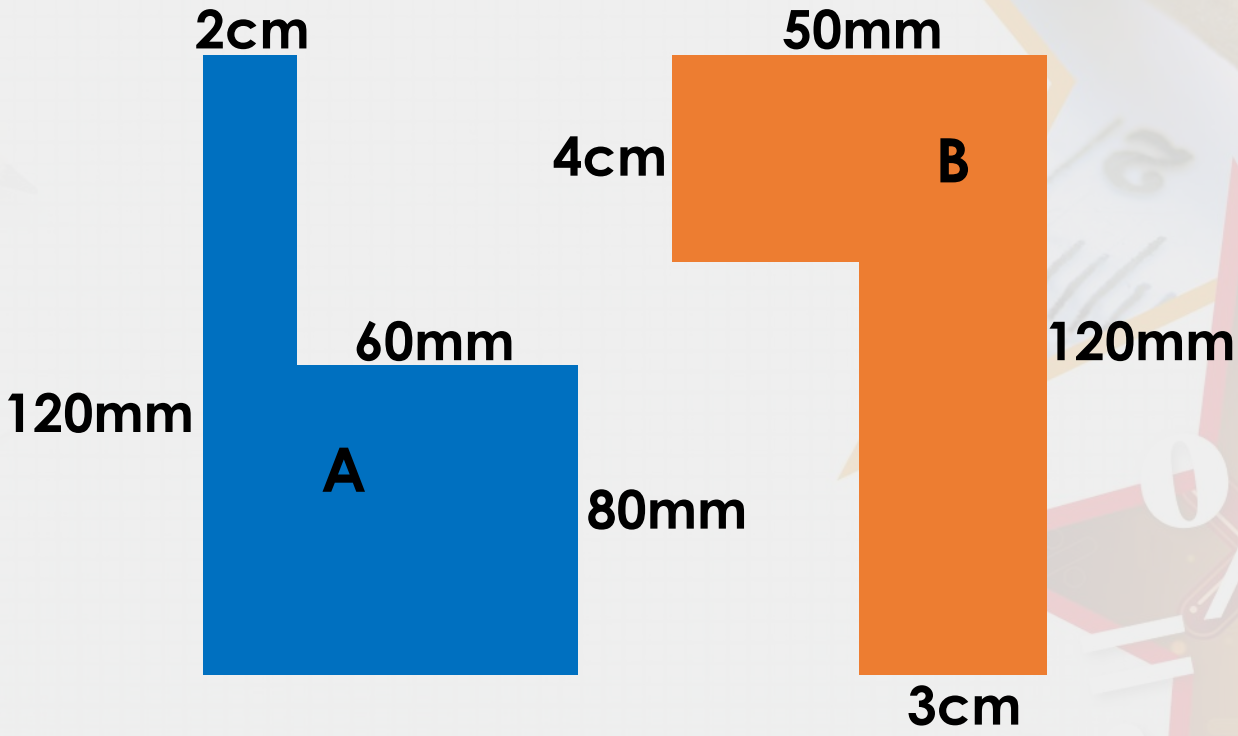
Introduction

Match the rectangle to the area.



Varied Fluency 1

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



Not to scale

Varied Fluency 1

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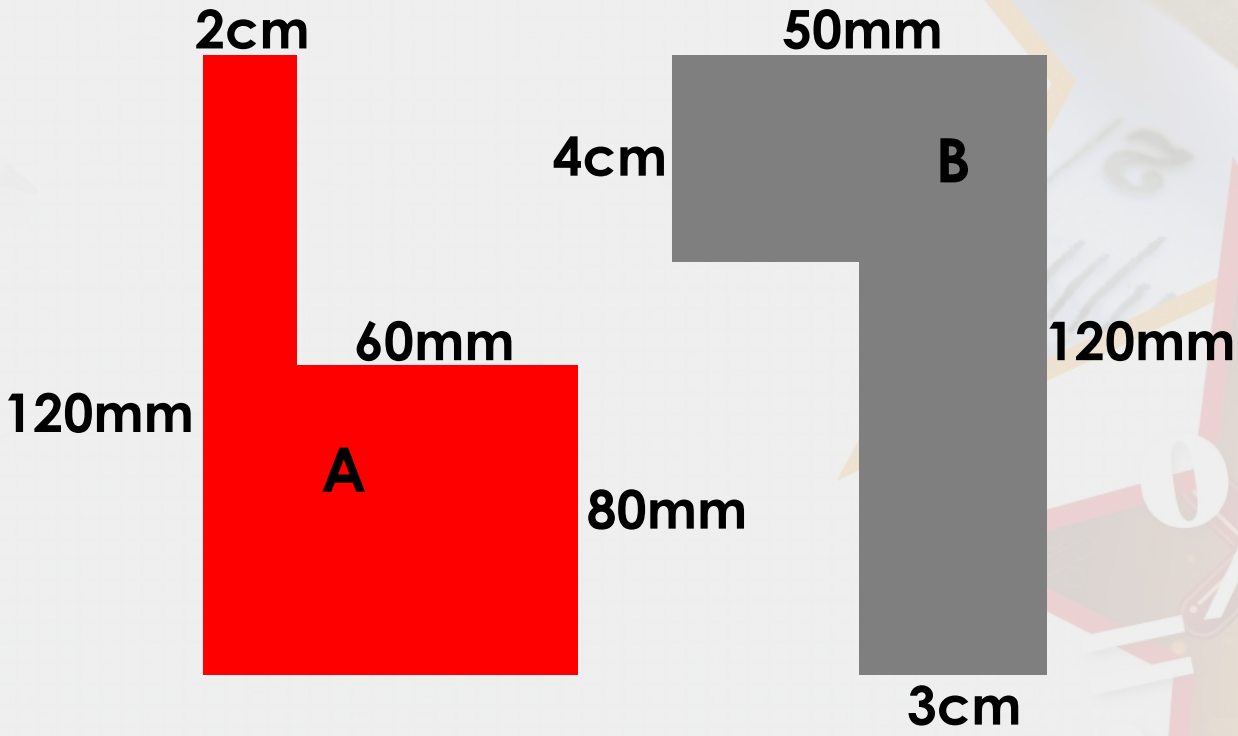
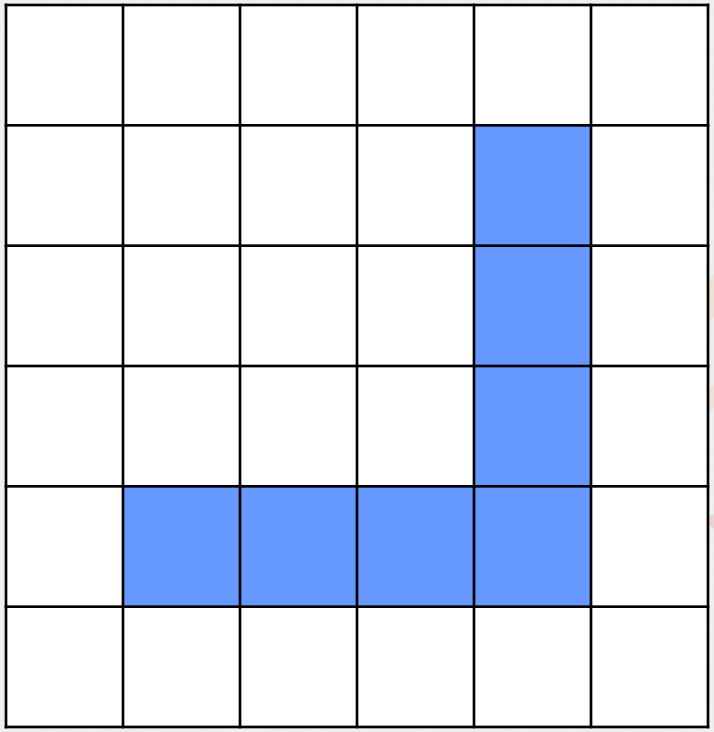


A = 72cm^2; B = 44cm^2, so A has the larger area.

Not to scale

Varied Fluency 2

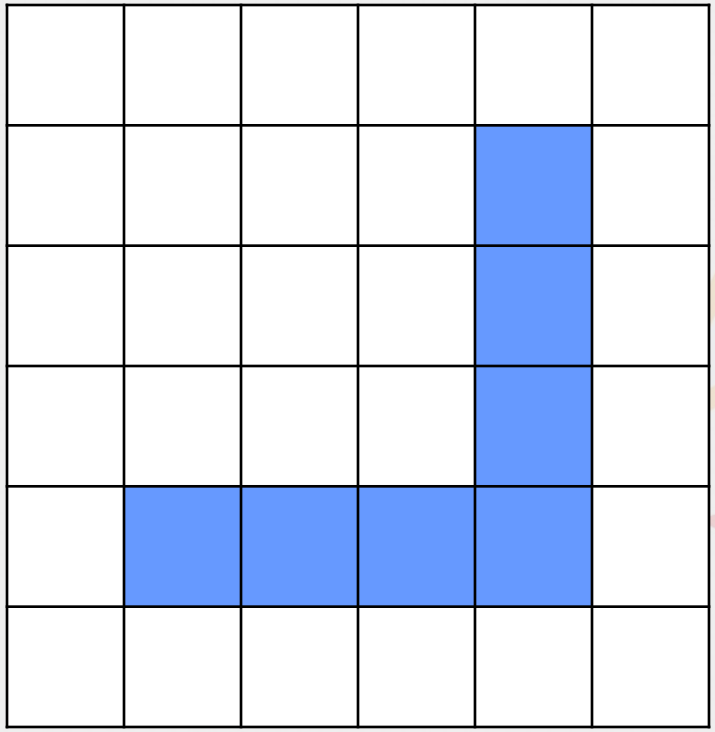
The side of each square measures 2m.
What is the area of the shape in cm^2?



Not to scale

Varied Fluency 2

The side of each square measures 2m.
What is the area of the shape in cm²?

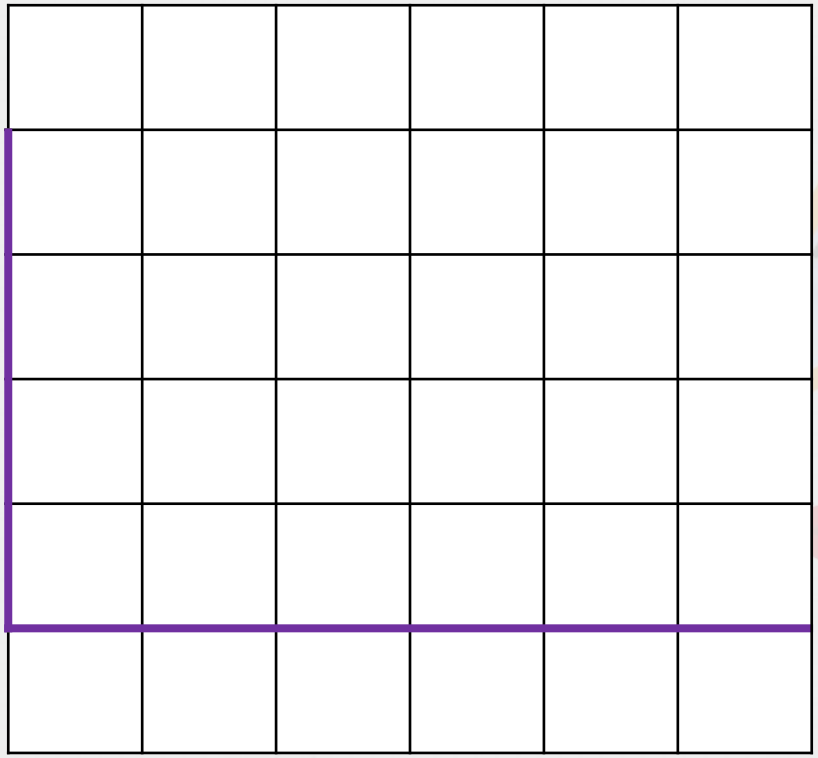


280cm²

Not to scale

Varied Fluency 3

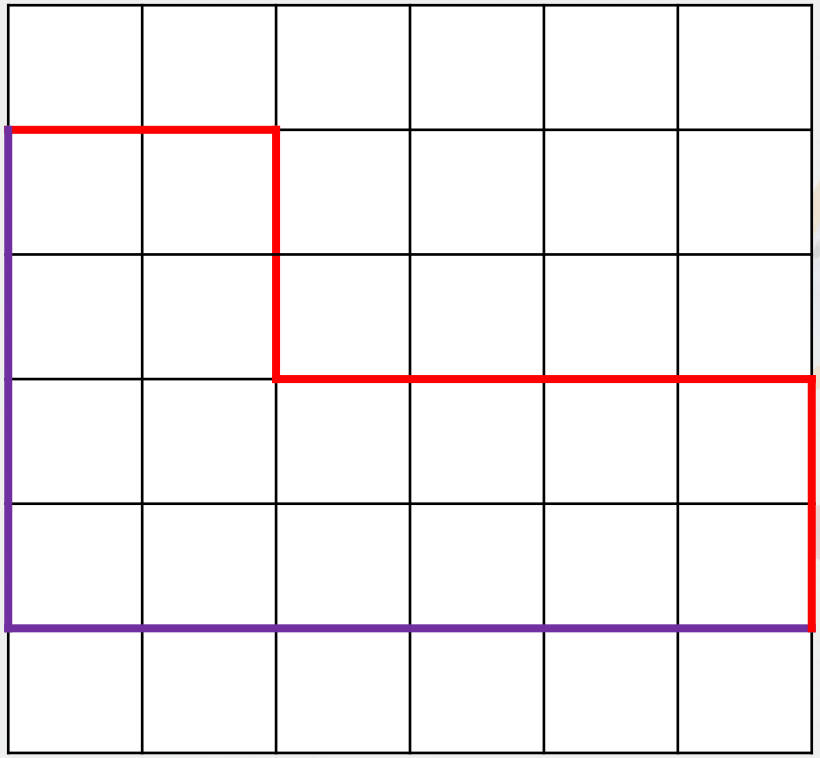
Complete the compound shape below so that is has an area of 64cm^2. The side of each square equals 20mm.



Not to scale

Varied Fluency 3

Complete the compound shape below so that is has an area of 64cm^2. The side of each square equals 20mm.

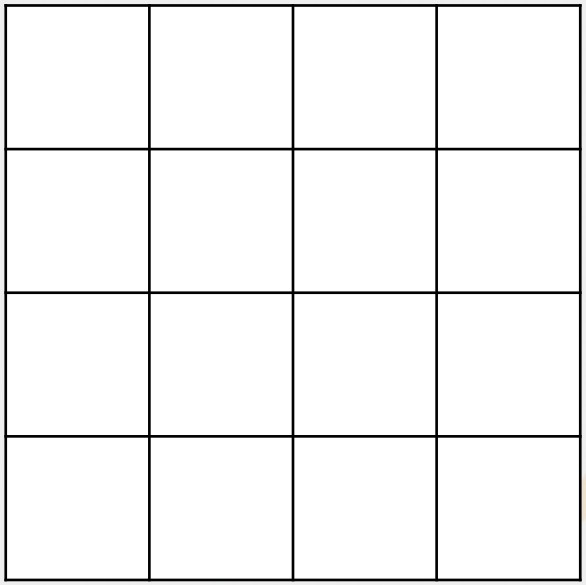


Any compound shape with an area of 64cm^2. There should be 16 squares within the shape.

Not to scale

Problem Solving 1

Each square has an area of 9mm^2.

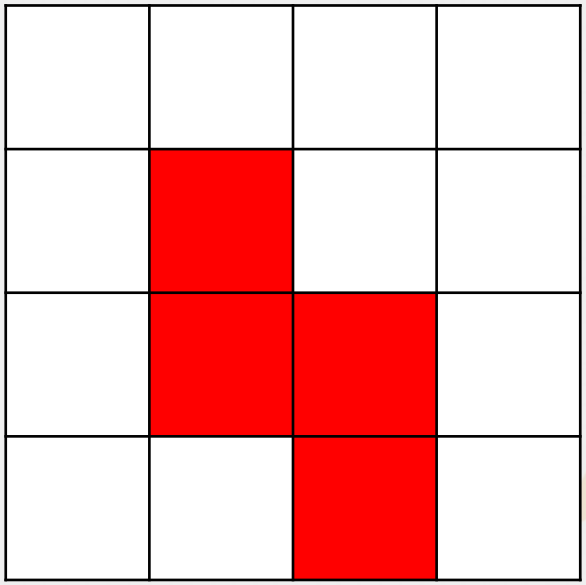


Draw 3 different compound shapes that have an area of 36mm^2.

Not to scale

Problem Solving 1

Each square has an area of 9mm².



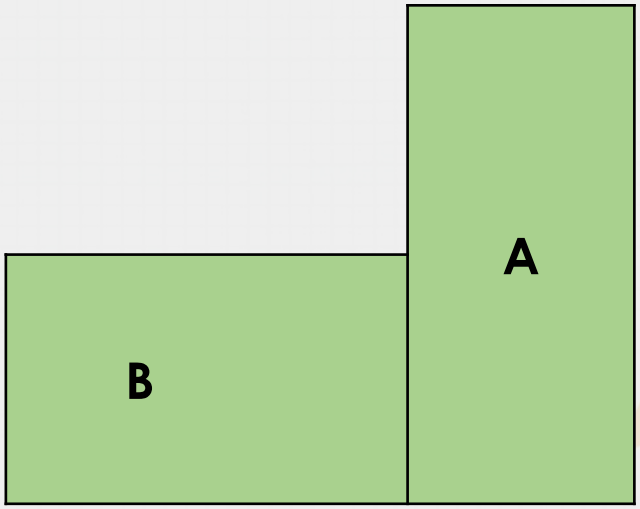
Draw 3 different compound shapes that have an area of 36mm².

Various answers, example above. Accept any compound shape with an area of 36mm² (4 squares).

Not to scale

Problem Solving 2

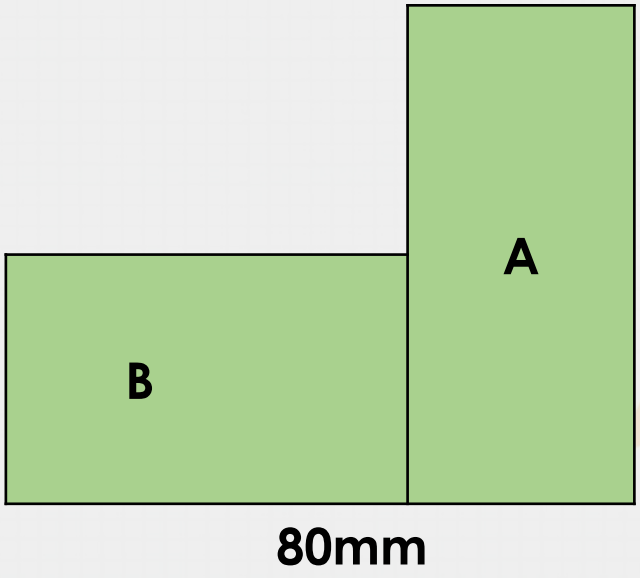
Add the missing lengths to make the following statement correct.



A has an area of 18cm² and B has an area of 18cm².

Not to scale

Add the missing lengths to make the following statement correct.



A has an area of 18cm^2 and B has an area of 18cm^2.

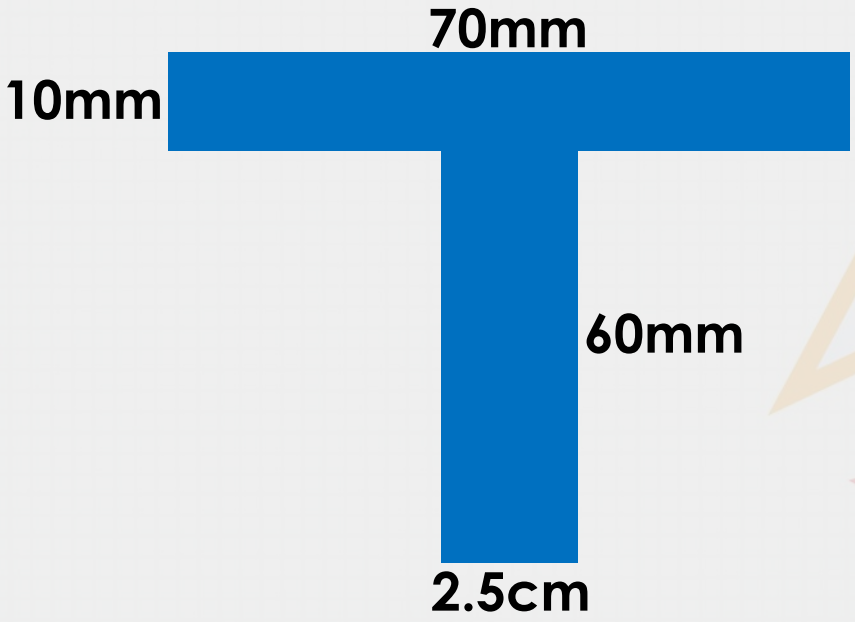
Various answers, for example:

A = 2cm x 9cm = 18cm^2; B = 6cm x 3cm = 18cm^2

Not to scale

Reasoning 1

Layla thinks the area of the shape is 220cm^2.
Is she correct? Explain why.



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Reasoning 1

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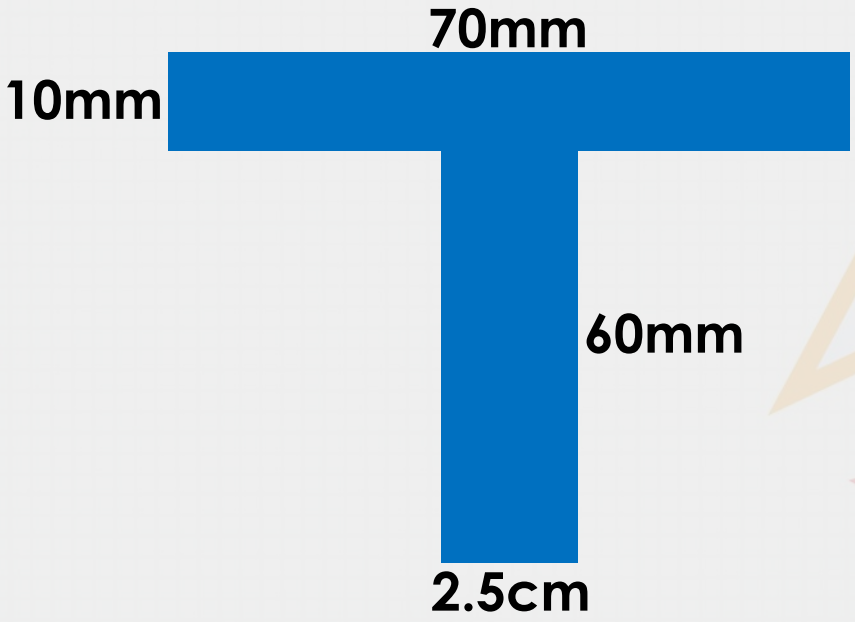
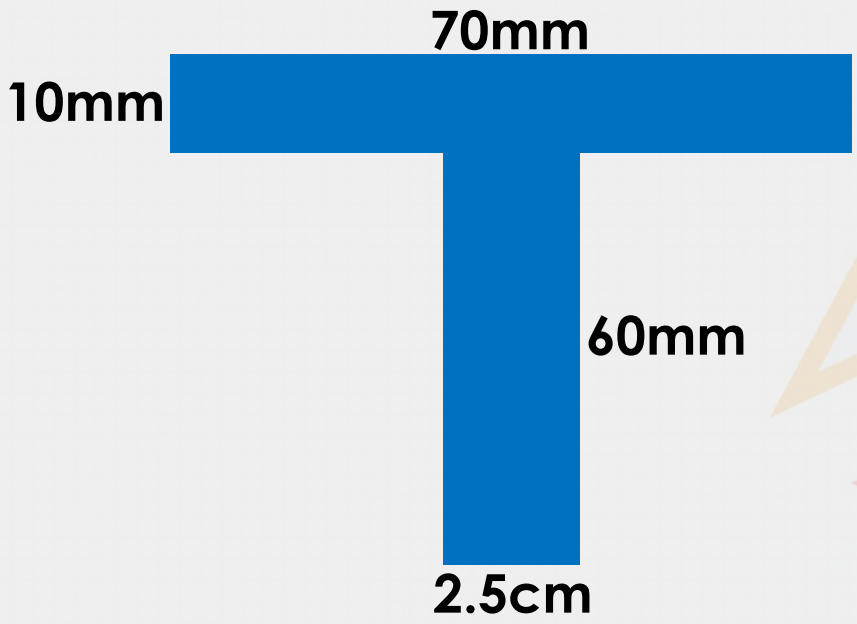


Layla is incorrect because…

Not to scale

Reasoning 1

Layla thinks the area of the shape is 220cm².
Is she correct? Explain why.



Layla is incorrect because 7cm x 1cm = 7cm²; 6cm x 2.5cm = 15cm² and 7cm² + 15cm² = 22cm². Layla has not converted from mm to cm.

Not to scale