



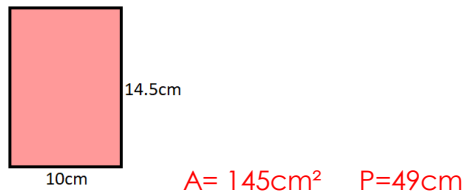
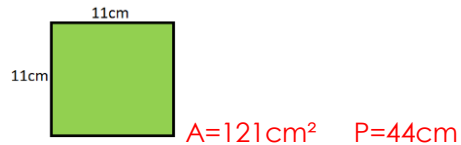
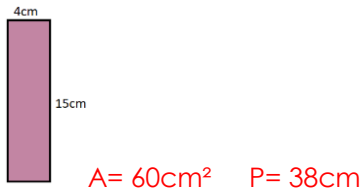
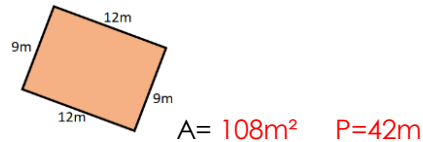
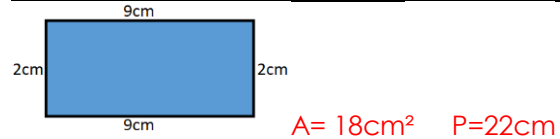
# Year 6

Remote Learning

## Maths Week 8 - answers

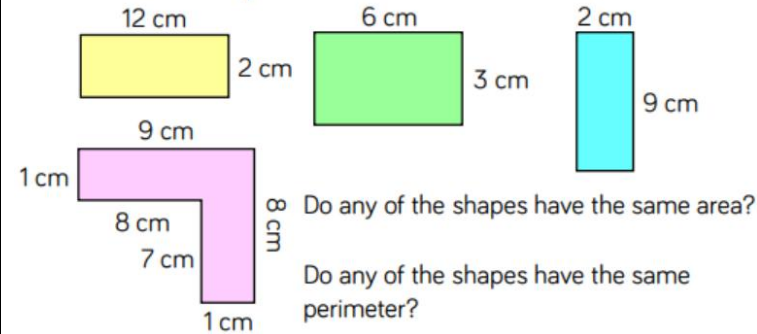
### Questions to Answer

Find the area and perimeter of these shapes:



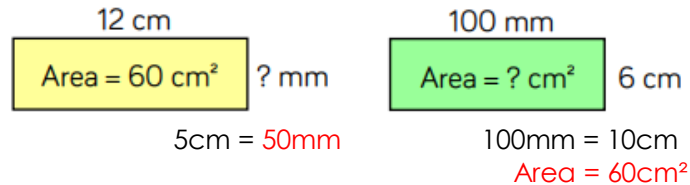
### Apply it!

Look at the shapes below.



Green and blue shapes have the same area.  
No shapes have the same perimeter.

Work out the missing values.



### True or false?

Two rectangles with the same perimeter can have different areas.  
Explain your answer with examples.

True - for example:

5cm by 3cm has an area of  $15\text{cm}^2$  and a perimeter of 16cm.  
6cm by 2cm has an area of  $12\text{cm}^2$  and a perimeter of 16cm.

### Games and Investigations

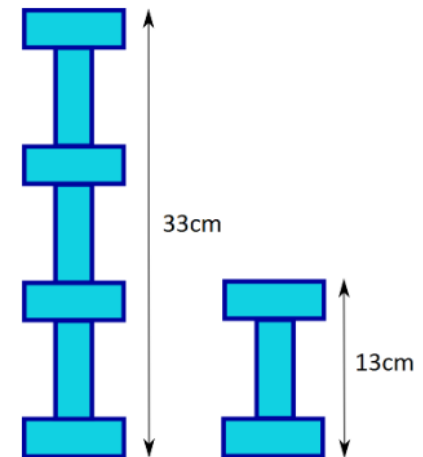
This was a really tricky problem, so well done if you gave it a go!

**Solution:**

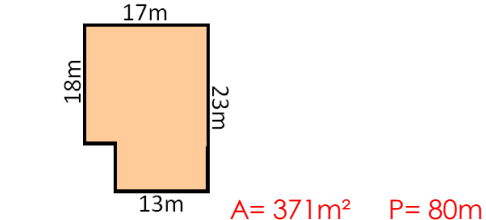
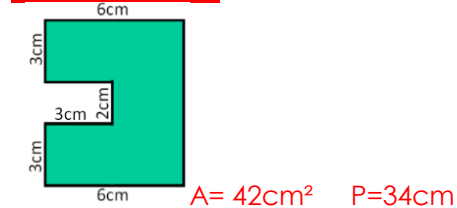
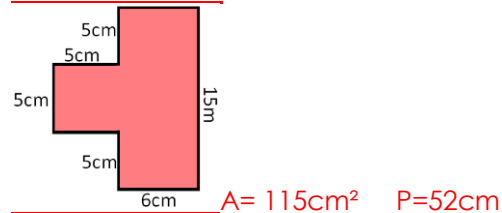
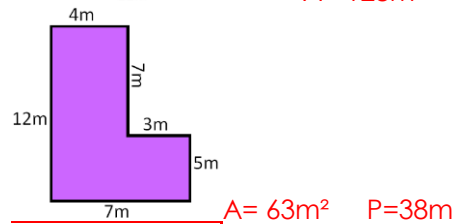
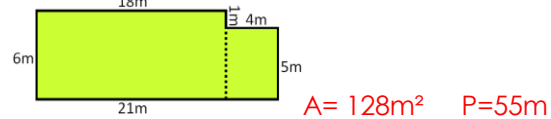
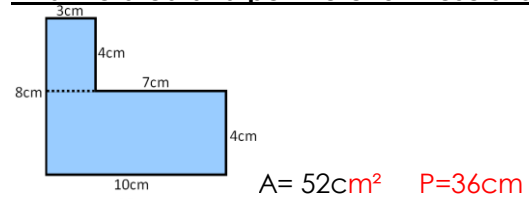
<https://nrich.maths.org/10344/solution>

This diagram shows a number of identical rectangles stacked on top of one another.

Using the measurements given, can you work out the perimeter of **one** single rectangle.



**Find the area and perimeter of these shapes:**



Three children are given the same shape to draw.

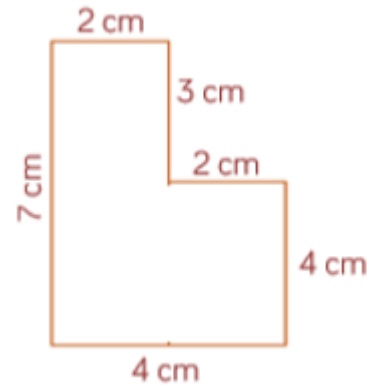
Kate says, "The smallest length is 2cm."

Lucy says, "The area is less than  $30\text{cm}^2$ ."

Ash says, "The perimeter is 22cm."

What could the shape be?

Possible answer:



**Challenge**

The area of a rectangle is  $247\text{cm}^2$ .

One of its sides is 26cm long.

What is the *perimeter* of the rectangle?

The other side is 9.5cm long.

Perimeter =  $26 + 26 + 9.5 + 9.5$  or  $(26 \times 2) + (9.5 \times 2) = 71\text{cm}$

You have 2 of the 'I' shapes (made of 3 rectangles) that is 13cm tall, one on the bottom and one on the top, with a single rectangle in the middle.

$33 - (13 \times 2) = 7$  This tells you the length of the longest side.

Now you can take this away from the 13, to leave you with 2 shorter sides.

$13 - 7 = 6$  This is the length of 2 shorter sides.

$6 \div 2 = 3$  Dividing by 2 gives you the length of one of the shorter sides.

Now you know that the longest side is 7cm and the shorter side is 3cm, you can work out the perimeter.

$7 + 7 + 3 + 3$  or  $(7 \times 2) + (3 \times 2) = 20\text{cm}$