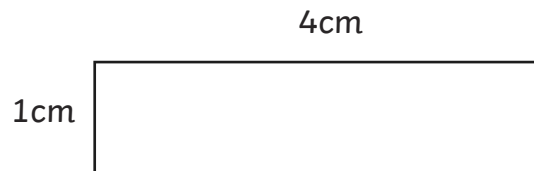
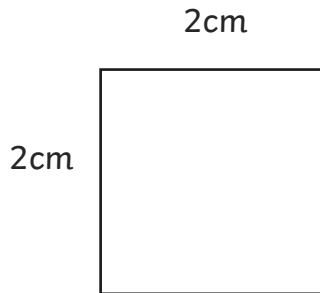


Investigating Perimeter and Area 3

Recognise that shapes with the same areas can have different perimeters and vice versa.

Using only sides of whole centimetres there are 2 rectangles with an area of 4cm^2 .



What is the perimeter of each rectangle?

Shape 1: Perimeter: _____ cm

Shape 2: Perimeter: _____ cm

What about rectangles with an area of 16cm^2 ?

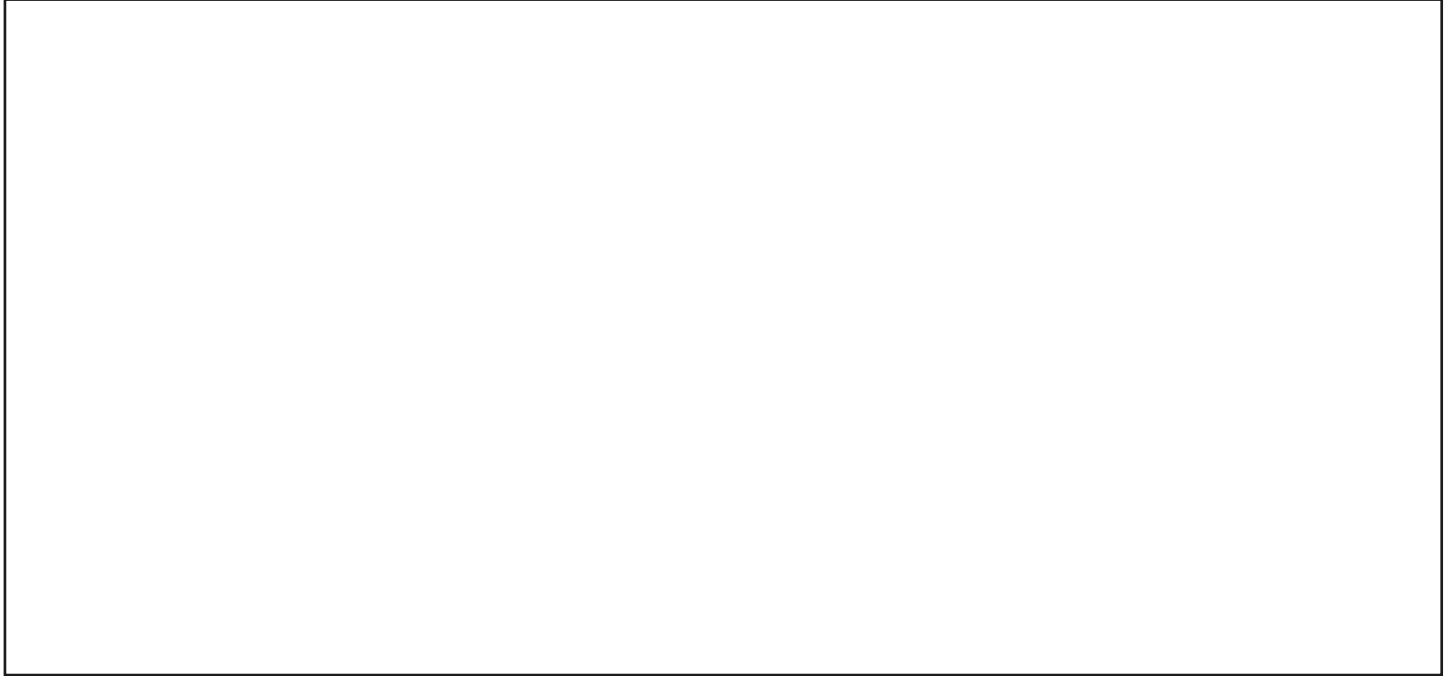
You do not need to draw the rectangles to scale. Simply write the lengths of the sides.

Shape	Area	Perimeter

What do you notice?

Investigating Perimeter and Area 3

A farmer wants a rectangular pen with an area of 36m^2 for some chickens. What would be the best shape for the pen, which uses the least amount of fence? Show the answer by drawing all the pens with sides of whole metres.



Shape	Area	Perimeter

What do you notice?

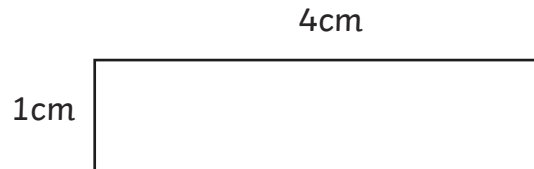
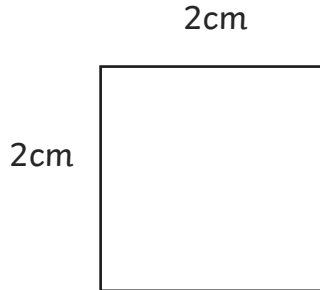
Challenge

Try other areas. Think about which areas will give a number of rectangles with lengths of whole centimetres.

Perimeter and Area 3 Answers

Recognise that shapes with the same areas can have different perimeters and vice versa.

Using only sides of whole centimetres there are 2 rectangles with an area of 4cm^2 .



What is the perimeter of each rectangle?

Shape 1: Perimeter: **8 cm**

Shape 2: Perimeter: **10 cm**

What about rectangles with an area of 16cm^2 ?

You do not need to draw the rectangles to scale. Simply write the lengths of the sides.

Rectangles of the following sizes:

Shape 1

4cm x 4cm

Shape 2

2cm x 8cm

Shape 3

1cm x 16cm

Shape	Area	Perimeter
1	16cm^2	16cm
2	16cm^2	20cm
3	16cm^2	34cm

What do you notice?

All of the shapes have the same area, but the perimeters are different.

Perimeter and Area 3 Answers

A farmer wants a rectangular pen with an area of 36m^2 for some chickens. What would be the best shape for the pen, which uses the least amount of fence? Show the answer by drawing all the pens with sides of whole metres.

Rectangles of the following sizes:		
Shape 1	Shape 2	Shape 3
6cm x 6cm	4cm x 9cm	3cm x 12cm
Shape 4	Shape 5	
2m x 18m	1m x 36m	

Shape	Area	Perimeter
1	36m^2	24m
2	36m^2	26m
3	36m^2	30m
4	36m^2	40m
5	36m^2	74m

What do you notice?

All of the shapes have the same area, but the perimeters are different.

Challenge

Try other areas. Think about which areas will give a number of rectangles with lengths of whole centimetres.