Investigating Perimeter and Area 3

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

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4cm	2cm	2cm		1cm	
					4cm
2cm	sing only sides of whole centimetres there are 2 rectangles with an area of 4cm².		ZCIII		





Investigating Perimeter and Area 3

A farmer wants a rectangular pen with an area of 36m² for some chickens. What would be best shape for the pen, which uses the least amount of fence? Show the answer by drawin		
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e pens with sides of whole in	eti es.	
6 1		
Shape	Area	Perimeter
	Area	Perimeter
nat do you notice?	Area	Perimeter

Challenge

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

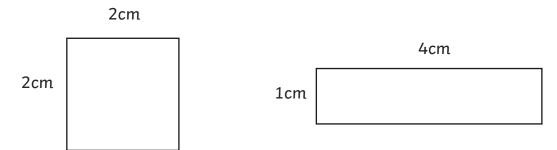




Perimeter and Area 3 Answers

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 4cm².



What is the perimeter of each rectangle?

Shape 1: Perimeter: 8 cm

Shape 2: Perimeter: 10 cm

What about rectangles with an area of 16cm²?

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

Rectangles of the following sizes:			
Shape 1	Shape 2	Shape 3	
4cm x 4cm	2cm x 8cm	1cm x 16cm	

Shape	Area	Perimeter
1	16cm²	16cm
2	16cm²	20cm
3	16cm²	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 36m² 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:	ving sizes:
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Shape 1 Shape 2 Shape 3

4cm x 4cm 2cm x 8cm 1cm x 16cm

Shape 4 Shape 5

Shape	Area	Perimeter
1	36m²	24m
2	36m²	26m
3	36m²	30m
4	36m²	40m
5	36m²	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.



