

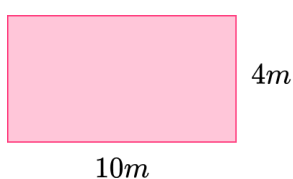
Area of a Rectangle - Worksheet

Skill

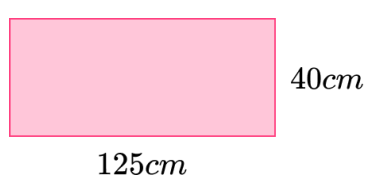
Group A - Area of Rectangles

Calculate the areas of the rectangles below.

1)



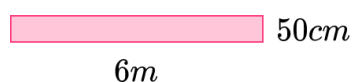
2)



3)



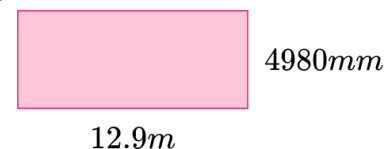
4)



5)



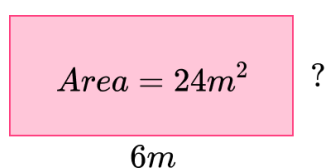
6)



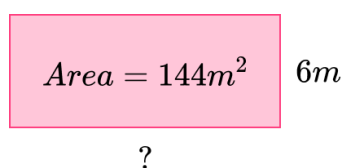
Group B - Missing Side Lengths

Calculate the missing side lengths in the rectangles below.

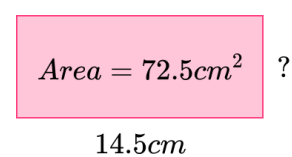
1)



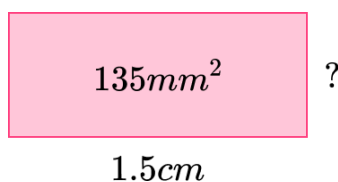
2)



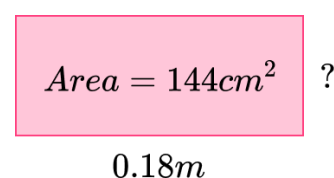
3)



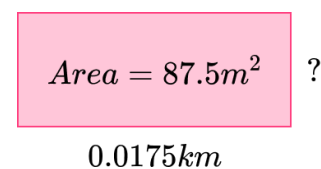
4)



5)



6)

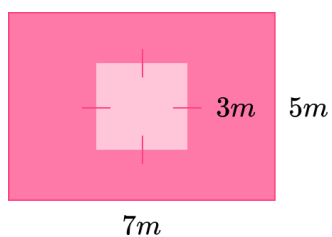


Area of a Rectangle - Worksheet

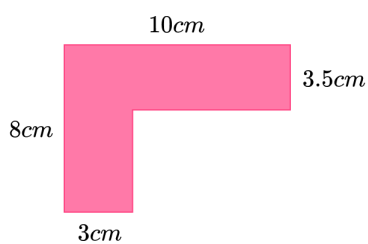
Group C - Compound Shapes

Calculate the area of the shaded regions below

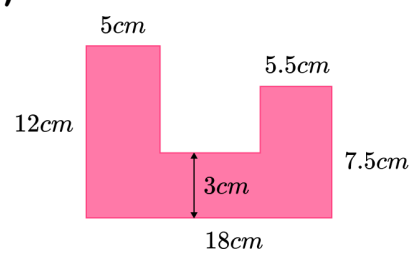
1)



2)



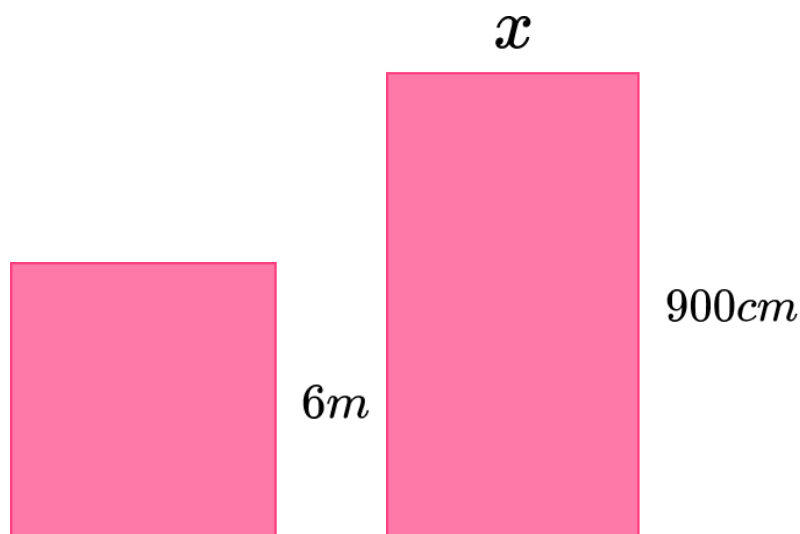
3)



Area of a Rectangle - Worksheet

Applied

- 1) a) A rectangle has an area of 48cm^2 .
Write down the lengths and widths of 4 different rectangles which have an area of 48cm^2 .
- b) A rectangle has an area of 140cm^2 .
Write down the lengths and widths of 4 different rectangles which have an area of 140cm^2 .
- 2) a) A rectangle has an area 100cm^2 and perimeter 104cm . What is the length and the width of the rectangle?
- 3) a) The square and the rectangle below have the same area. Work out the value of x .



- 4) a) Mrs. Amin is tiling her kitchen wall. The dimensions of her wall are $8.5m$ by $6m$. Each square tile she wants to buy is $25cm$ long. How many tiles will she need to tile her entire kitchen wall?
- b) If each tile costs $\pounds 3.50$ how much will it cost to tile her entire kitchen?

Area of a Rectangle - Exam Questions

- 1) (a) Find the area of the rectangle.
Remember to show your full working.



8m

19m

Diagram not
drawn to scale.

.....

(2)

- (b) What is the area of the shape in square centimetres?

.....

(2)

(4 marks)

- 2) (a) A rectangle is 8cm by 2cm.



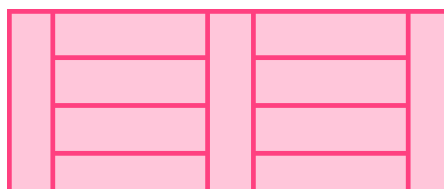
8cm

2cm

- 11 of these rectangles are connected to form the pattern below:

.....

(2)



What is the area of the pattern?

- (b) Work out the perimeter of the above pattern.

.....

(2)

(4 marks)

- 3) (a) Mr. McDonald is a farmer. He keeps his cattle in a field which is 28m by 14m. Each cattle needs a minimum of 5 square metres to graze. What is the maximum number of cattle Mr. McDonald can keep?

.....

(3)

- (b) Mr. McDonald changes his mind and decides to keep sheep in the field instead. Each sheep needs 3 square metres to graze. What is the maximum number of sheep he can keep?

.....

(2)

(5 marks)

Area of a Rectangle - Exam Questions

- 4) (a) Calculate the value of x in the diagram on the right.

$$\text{Area} = 1400\text{m}^2$$

35m

x

Diagram not drawn to scale.

.....
(2)

(2 marks)

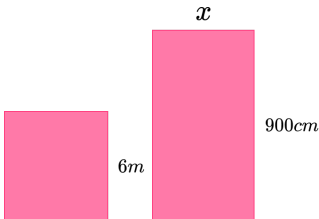
Area of a Rectangle - Answers

	Question	Answer
Group A	Skill Questions	
	Calculate the areas of the rectangles below. Remember to show your workings. <i>Please refer to the worksheet for diagrams.</i>	1) 40m^2 2) 5000cm^2 3) 28.16mm^2 4) $30\,000\text{cm}^2$ 5) 31.5km^2 6) 64.242m^2
Group B	Calculate the missing side lengths in the rectangles below. Remember to show your working. <i>Please refer to the worksheet for diagrams.</i>	1) 4m 2) 24m 3) 5cm 4) 9mm 5) 8cm 6) 5m

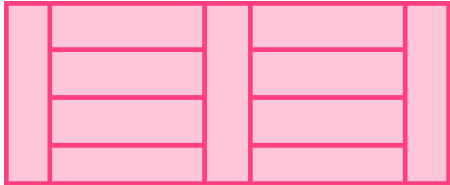
Area of a Rectangle - Answers

	Question	Answer
Group C	Skill Questions	
	Calculate the area of the shaded regions below: <i>Please refer to the worksheet for diagrams.</i>	1) 26m^2 2) 48.5cm^2 3) 123.75cm^2

Area of a Rectangle - Answers

	Question	Answer
	Applied Questions	
1)	a) A rectangle has an area of 48cm^2 . Write down the lengths and widths of 4 different rectangles which have an area of 48cm^2 .	a) 4cm by 12cm 8cm by 6cm 1cm by 48cm 2cm by 24cm 3cm by 16cm
	b) A rectangle has an area of 140cm^2 . Write down the lengths and widths of 4 different rectangles which have an area of 140cm^2 .	10cm by 14cm 2cm by 70cm b) 140cm by 1cm 7cm by 20cm
2)	a) A rectangle has an area 100cm^2 and perimeter 104cm. What is the length and the width of the rectangle?	a) 50cm by 2cm
3)	The square and the rectangle below have the same area. Work out the value of x . 	a) $x = 4\text{m}$
4)	a) Mrs. Amin is tiling her kitchen wall. The dimensions of her wall are 8.5m by 6m. Each square tile she wants to buy is 25cm long. How many tiles will she need to tile her entire kitchen wall?	$850 \times 600 = 510,000$ a) $25 \times 25 = 625$ $510,000 \div 625 = 816$ tiles
	b) If each tile costs £3.50 how much will it cost to tile her entire kitchen?	b) $816 \times 3.5 = \text{£}2856$

Area of a Rectangle - Mark Scheme

	Question	Answer	
	Exam Questions		
1) (a)	Find the area of the rectangle. Remember to show your full working.  $8m$ $19m$ Diagram not drawn to scale.	(a) 19×8 $152m^2$	(1) (1)
(b)	What is the area of the shapes in square centimeters?	(b) 1900×800 $1,520,000cm^2$	(1) (1)
2) (a)	A rectangle is 8cm by 2cm.  $8cm$ $2cm$ 11 of these rectangles are connected to form the pattern below:  What is the area of the pattern?	(a) $8 \times 2 = 16$ $16 \times 11 = 176cm^2$	(1) (1)
(b)	Work out the perimeter of the above pattern.	(b) $P = 2 + 8 + 2 + 8 + 2 + 8 + 2 + 8 + 2 + 8 + 2 + 8$ $P = 60cm$	(1) (1)

3) (a)	Mr. McDonald is a farmer. He keeps his cattle in a field which is 28m by 14m. Each cattle needs a minimum of 5 square metres to graze. What is the maximum number of cattle Mr. McDonald can keep?	(a) $28 \times 14 = 392\text{m}^2$ $392 \div 5 = 78.4$ Max = 78 cattle	(1) (1) (1)
(b)	Mr. McDonald changes his mind and decides to keep sheep in the field instead. Each sheep needs 3 square metres to graze. What is the maximum number of sheep he can keep?	(b) $392 \div 3 = 130.6667$ Max = 130 cattle	(1) (1)
4) (a)	Calculate the value of x in the diagram on the right. $\text{Area} = 1400\text{m}^2$ 35m x Diagram not drawn to scale.	(a) $1400 \div 35$ $x = 40\text{m}$	(1) (1)

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