

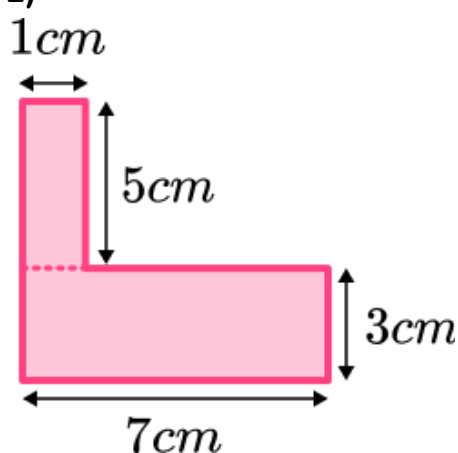
Area of Compound Shapes - Worksheet

Skill

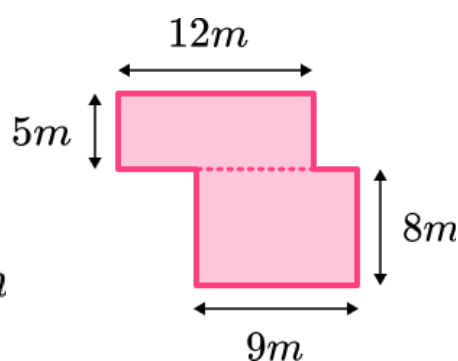
Group A - Area of Rectilinear Shapes

Calculate the area of the shaded regions below.

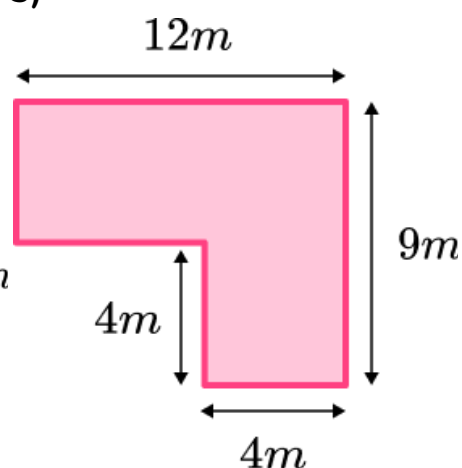
1)



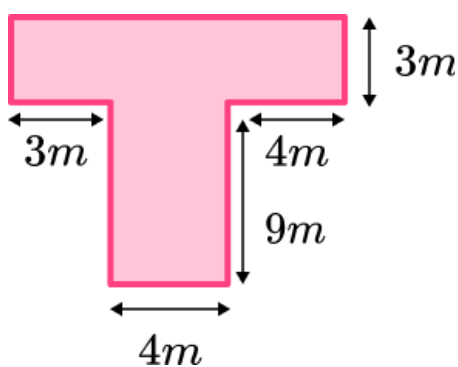
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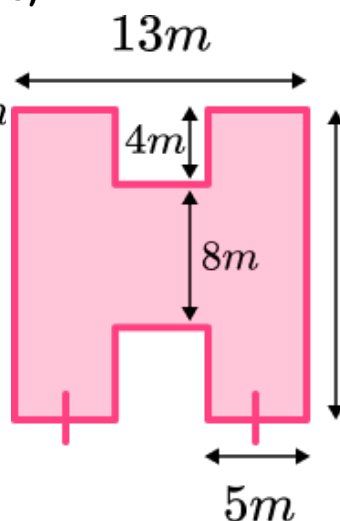
3)



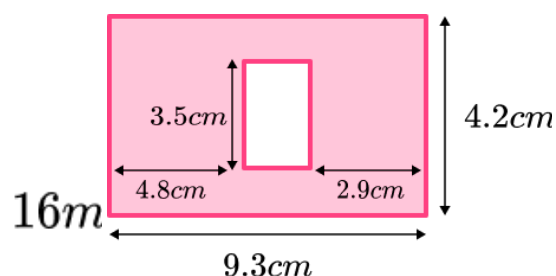
4)



5)



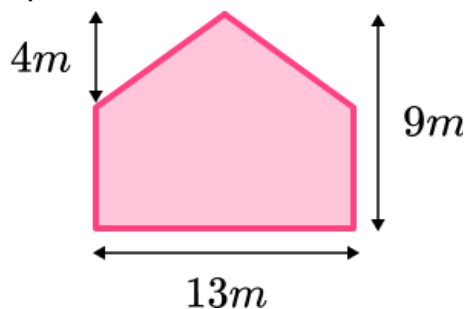
6)



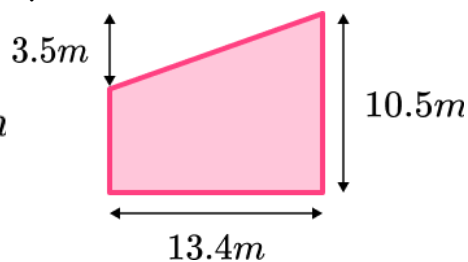
Group B - Area of Compound Shapes

Calculate the area of the shapes below.

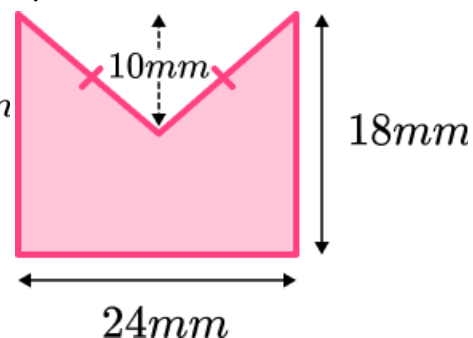
1)



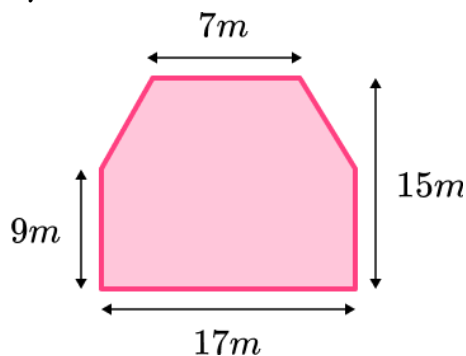
2)



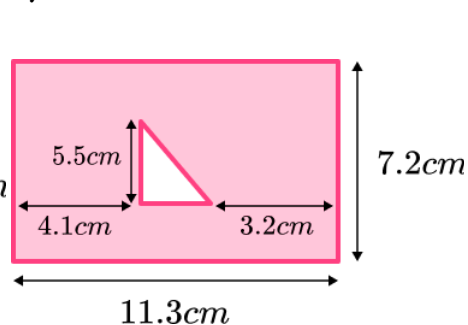
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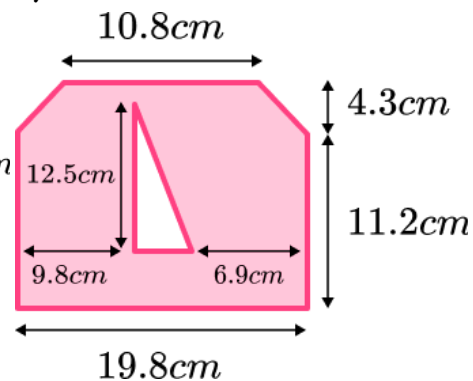
4)



5)



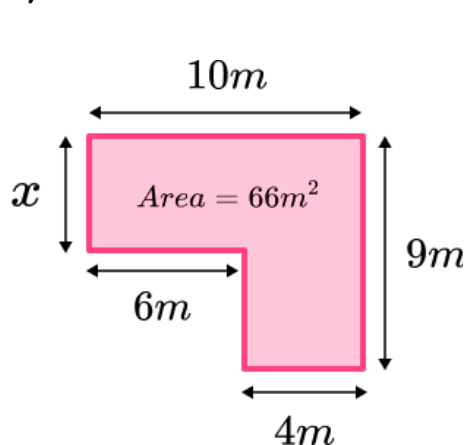
6)



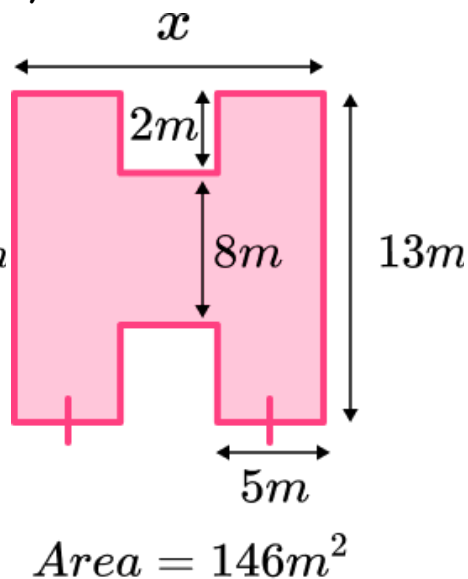
Group C - Missing Side Lengths

Calculate the missing side lengths below:

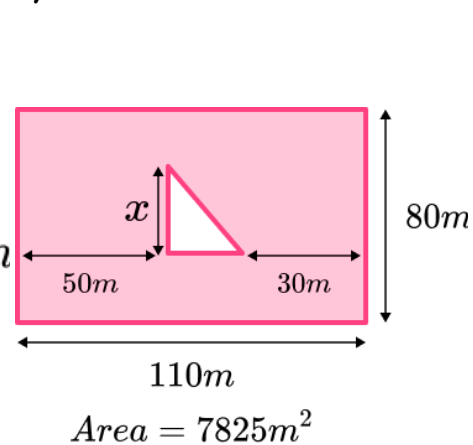
1)



2)



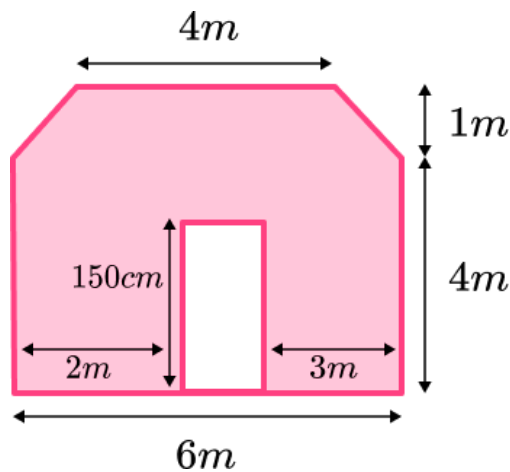
3)



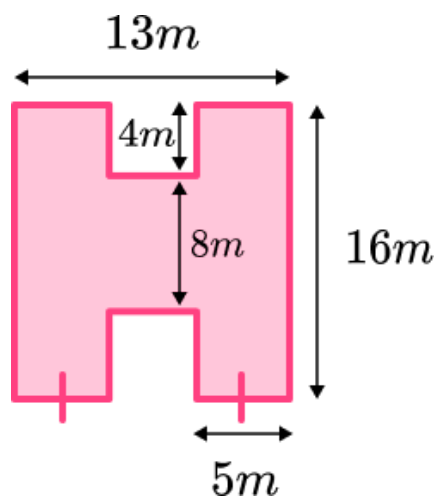
Area of Compound Shapes - Worksheet

Applied

- 1) Draw 4 different compound shapes with an area of 48cm^2
- 2) Sarah is painting the front of her house. She has four 7L cans of paint. Each can of paint covers an area of 6m^2 . Does she have enough paint to paint the front of the house?

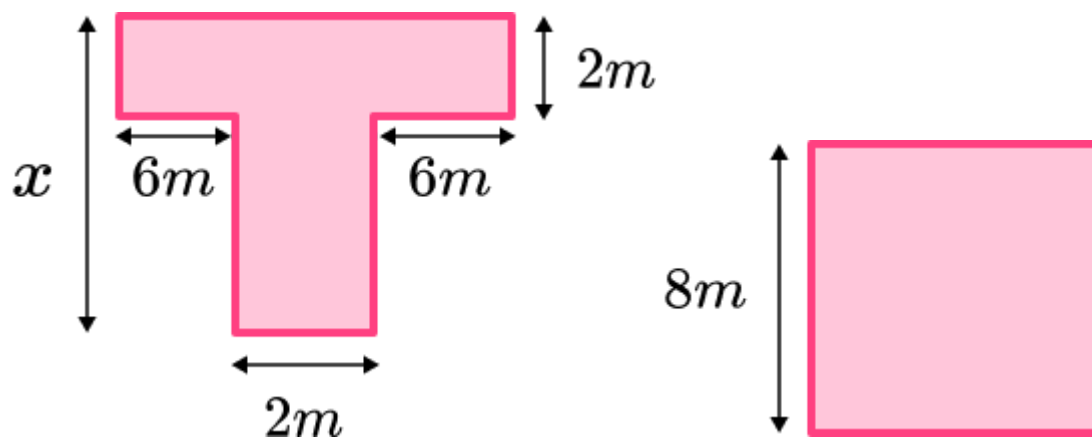


- 3) (a) Mrs. Maryam is tiling her bathroom floor as shown below. Each square tile she wants to buy is 50cm long. How many tiles will she need to tile her entire bathroom floor?



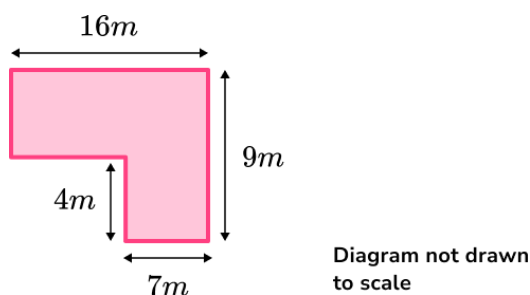
- (b) If each tile costs £4.50 how much will it cost to tile her entire bathroom?

- 4) (a) The square and the compound shape below have the same area. Work out the value of x .



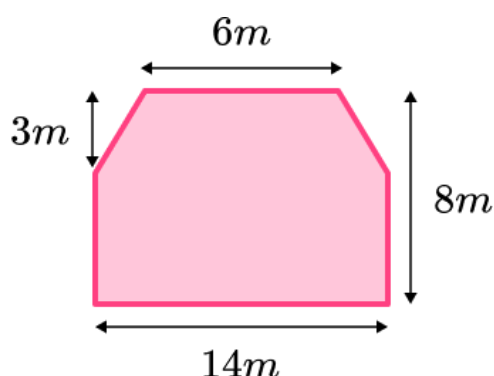
Area of Compound Shapes - Exam Questions

- 1) (a) The diagram on the right shows a shape. Work out the area of the shape. (3)



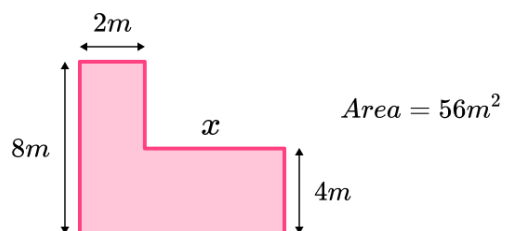
- (b) What is the area of the shapes in square centimetres? (2)
(4 marks)

- 2) (a) A farmer owns the lamb enclosure shown below. Each lamb costs approximately £75 and the farmer estimates that each lamb requires a minimum of 2 square metres to graze freely. What is the maximum number of lambs that could fit on the field? (4)



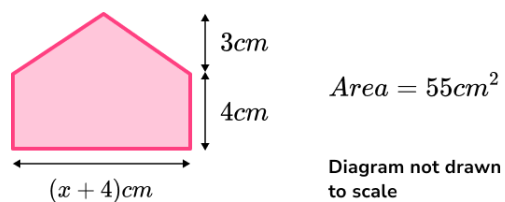
- (b) How much would it cost to acquire the lambs in the enclosure? (2)
(6 marks)

- 3) What is the perimeter of the shape on the right?



.....
(5 marks)

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

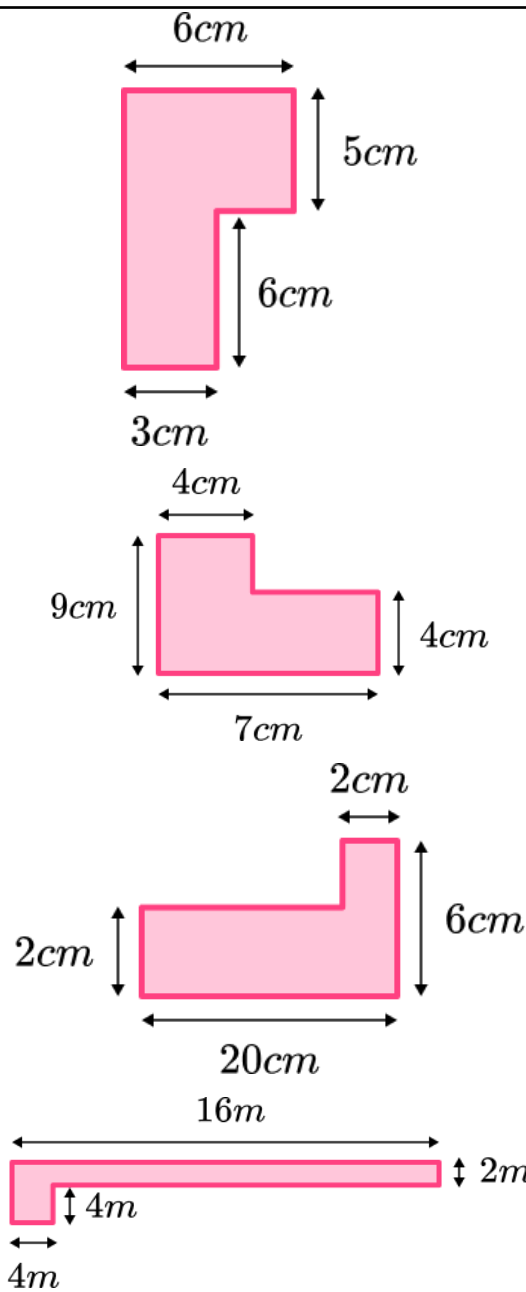


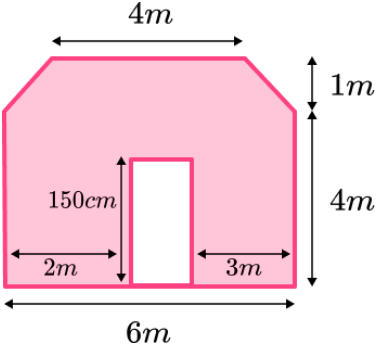
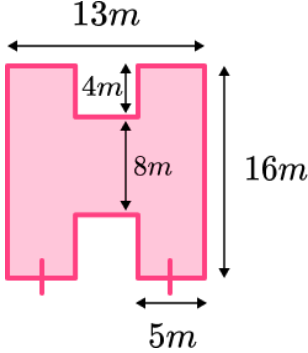
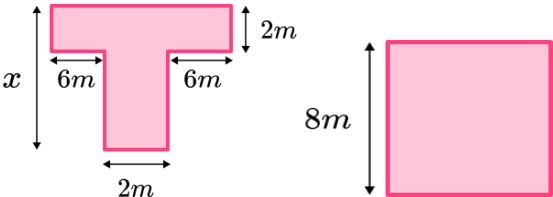
.....
(4 marks)

Area of a Compound Shapes - Answers

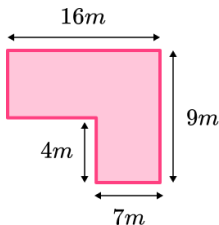
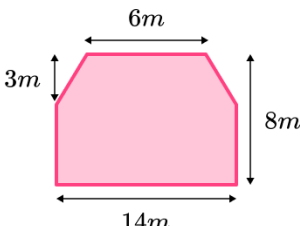
	Question	Answer
Group A	Skill Questions	
	Calculate the areas of the rectilinear shapes below. Remember to show your workings. <i>Please refer to the worksheet for diagrams.</i>	1) 26cm^2 2) 132m^2 3) 76m^2 4) 69m^2 5) 184m^2 6) 33.46cm^2
Group B	Calculate the areas of the compound shapes below. Remember to show your workings. <i>Please refer to the worksheet for diagrams.</i>	1) 91m^2 2) 117.25m^2 3) 312mm^2 4) 225m^2 5) 70.36cm^2 6) 268.175cm^2
Group C	Calculate the missing lengths below. Remember to show your workings. <i>Please refer to the worksheet for diagrams.</i>	1) $x = 5\text{m}$ 2) $x = 12\text{m}$ 3) $x = 65\text{m}$

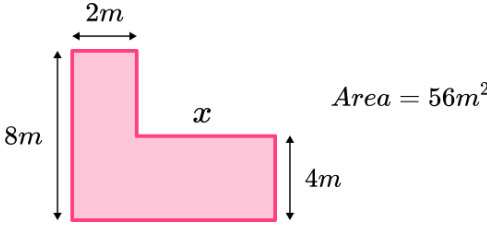
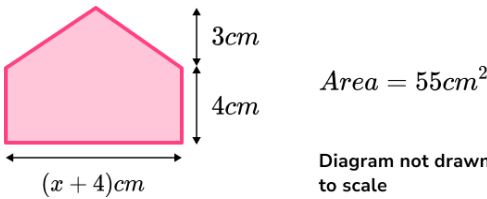
Area of Compound Shapes - Answers

	Question	Answer
	Applied Questions	
1)	Draw 4 different compound shapes with an area of 48cm^2	

2)	<p>Sarah is painting the front of her house. She has four 7L cans of paint. Each can of paint covers an area of $6m^2$. Does she have enough paint to paint the front of the house?</p> 	<p>No she does not have enough. She will need 4.6 cans.</p>
3)	<p>a) Mrs. Maryam is tiling her bathroom floor as shown below. Each square tile she wants to buy is 50cm long. How many tiles will she need to tile her entire bathroom floor?</p>  <p>b) If each tile costs £4.50 how much will it cost to tile her entire bathroom?</p>	<p>a) 736 tiles</p> <p>b) It would cost £3312</p>
4)	<p>The square and the compound shape below have the same area. Work out the value of x.</p> 	<p>$x = 20m$</p>

Area of Compound Shapes - Mark Scheme

	Question	Answer
	Exam Questions	
1) (a)	<p>The diagram on the right shows a shape. Work out the area of the shape.</p>  <p>Diagram not drawn to scale</p>	<p>(a) $7 \times 4 = 28$ seen (1)</p> <p>16×5 seen or 80 seen (1)</p> <p>$108m^2$ seen (1)</p>
(b)	What is the area of the shapes in square centimeters?	<p>(b) 108×10000 (1)</p> <p>$1080000cm^2$ (1)</p>
2) (a)	<p>A farmer owns the lamb enclosure shown below. Each lamb costs approximately £75 and the farmer estimates that each lamb requires a minimum of 2 square metres to graze freely. What is the maximum number of lambs that could fit on the field?</p> 	<p>(a) $14 \times 5 = 70$ seen (area of the rectangle) (1)</p> <p>area of the trapezium = 30 or evidence of working (1)</p> <p>$70 + 30 = 100$ seen (total area) (1)</p> <p>$100 \div 2 = 50$ (1)</p>
(b)	How much would it cost to acquire the lambs in the enclosure?	<p>(b) 75×50 seen (carry over any mistakes) (1)</p> <p>£3750 seen (1)</p>

3)	<p>What is the perimeter of the shape on the right?</p>  <p>$Area = 56m^2$</p>	$8 \times 2 = 16$ seen (1) $56 - 16$ seen or 40 seen (1) $40 \div 4$ seen (1) $x = 10$ seen (1) $P = 8 + 2 + 4 + 10 + 4 + 12 = 40m$ (1)	(5)
4)	<p>Calculate the value of x in the diagram on the right.</p>  <p>$Area = 55cm^2$</p> <p>Diagram not drawn to scale</p>	$4(x + 4)$ seen or $\frac{3(x+4)}{2}$ seen or splits shape into a rectangle and triangle (1) Correctly expanding brackets (1) Correctly rearranging equation (1) $x = 6$ seen (1)	(4)

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