

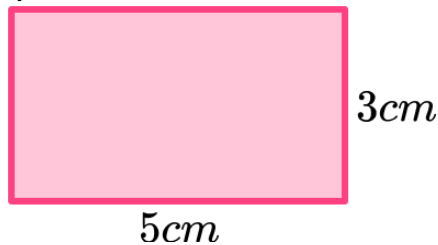
How to work out area - Worksheet

Skill

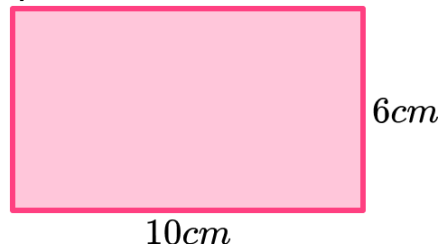
Group A - Area of rectangles, parallelograms, triangles and rhombuses

Work out the area of each shape.

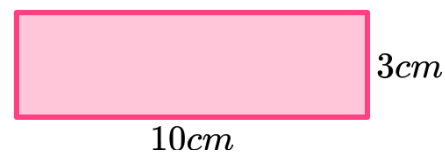
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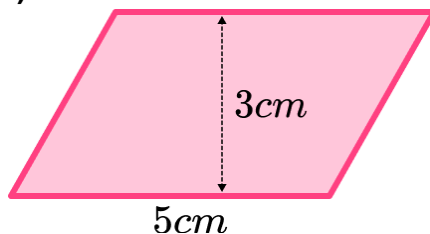
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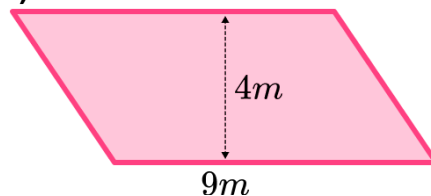
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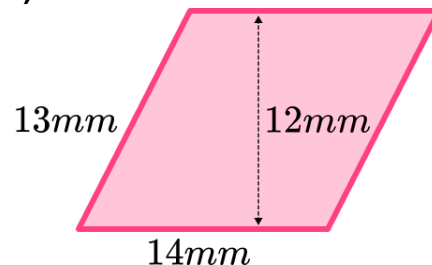
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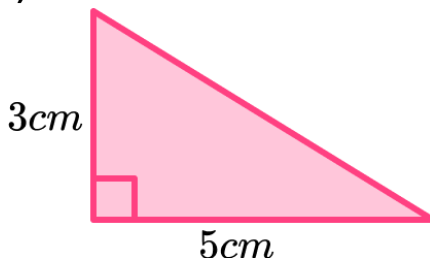
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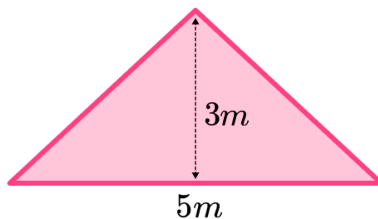
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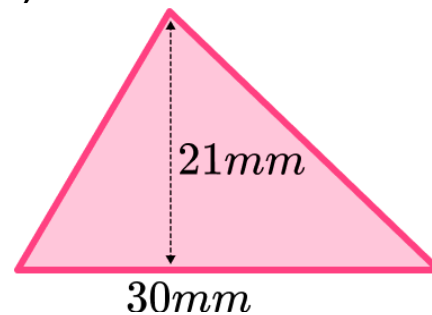
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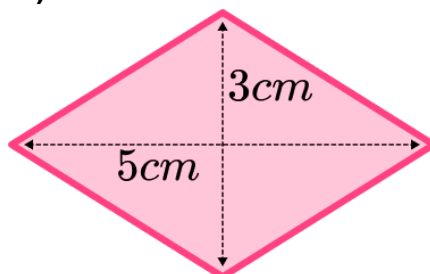
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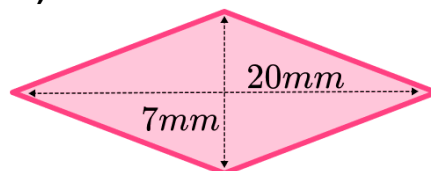
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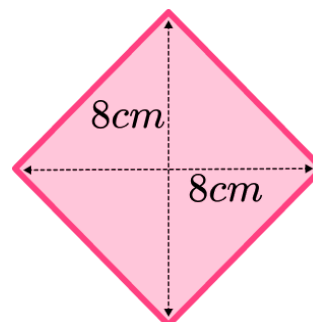
10)



11)



12)

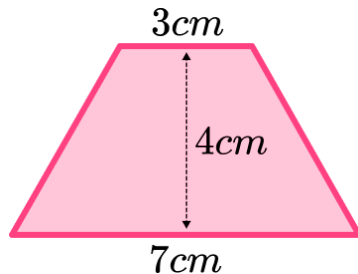


How to work out area - Worksheet

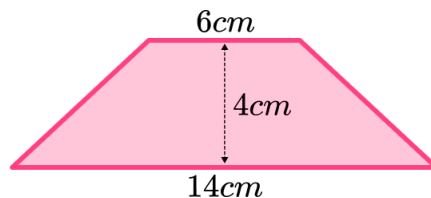
Group B - Area of trapeziums and circles

Find the area of each shape. Give your answers to 1 d.p where necessary.

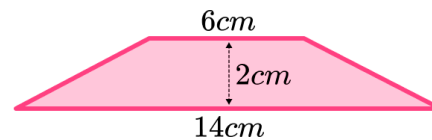
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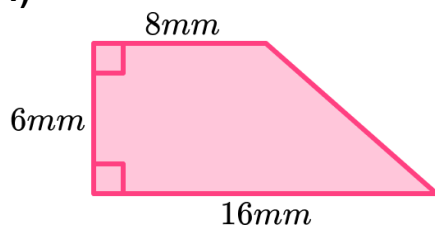
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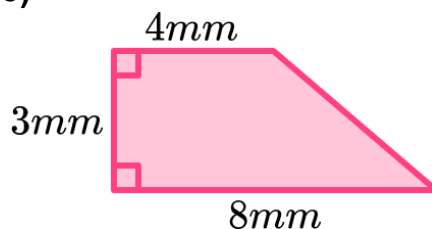
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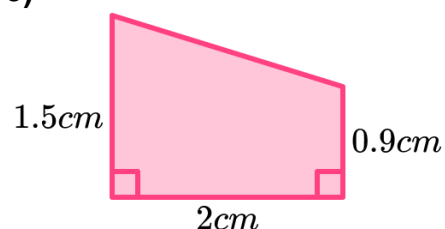
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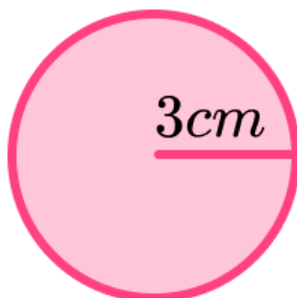
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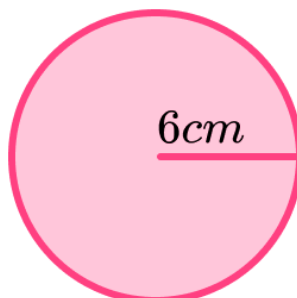
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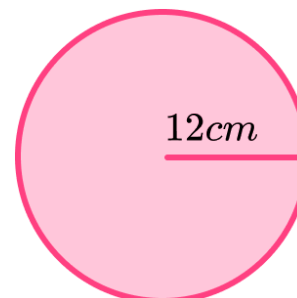
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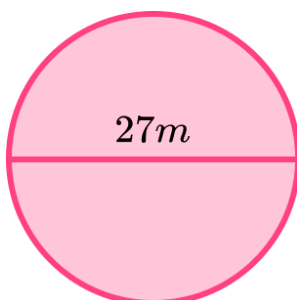
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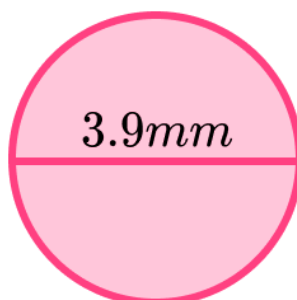
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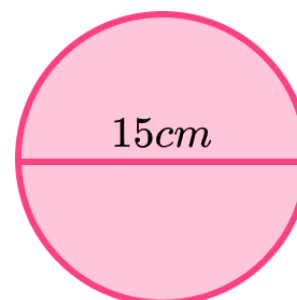
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11)



12)



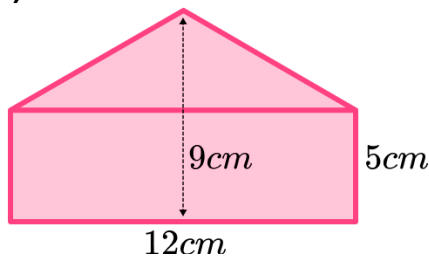
How to work out area - Worksheet

Group C - Area of compound shapes

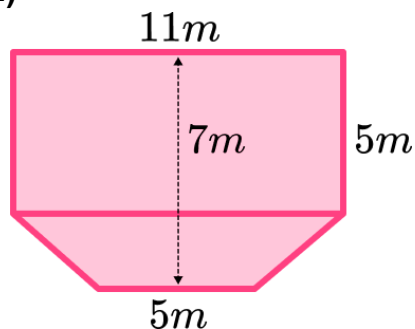
Find the area of each shape. For questions 8-12, find the shaded area.

Give your answers to 1 d.p. where necessary.

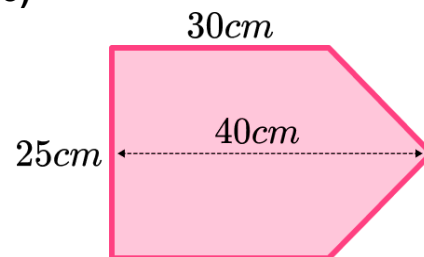
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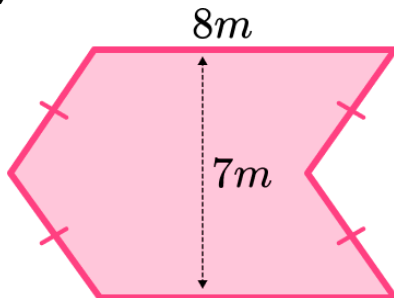
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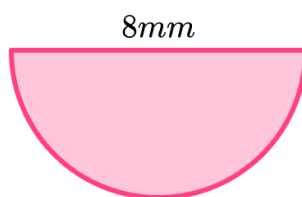
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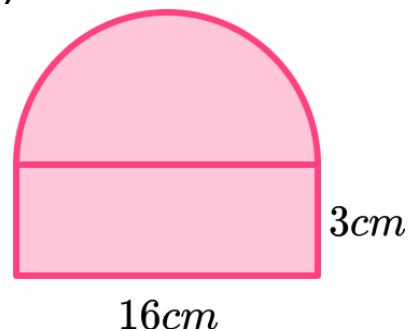
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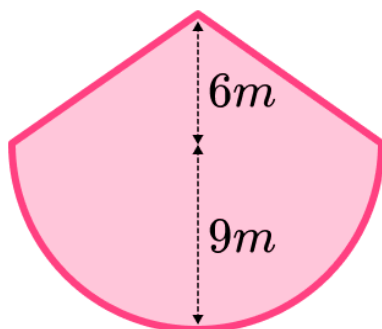
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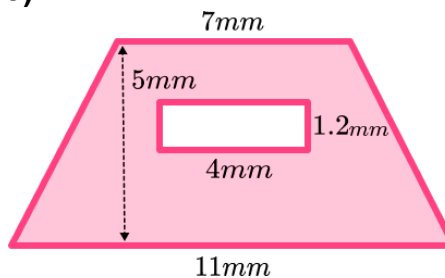
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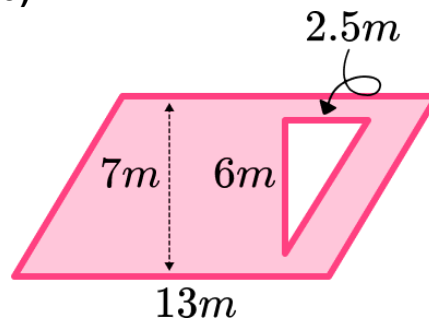
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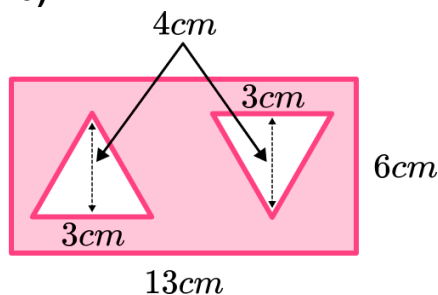
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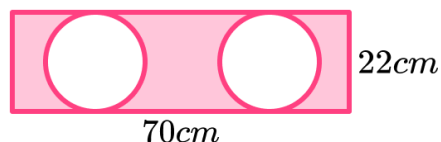
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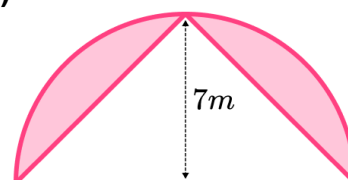
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11)



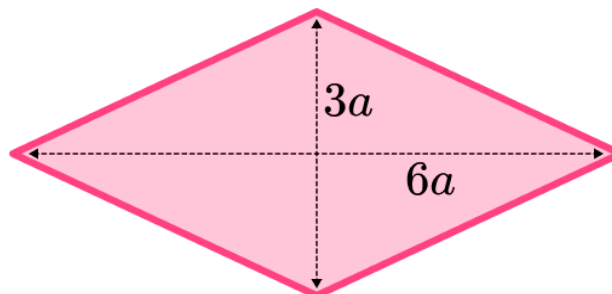
12)



How to work out area - Worksheet

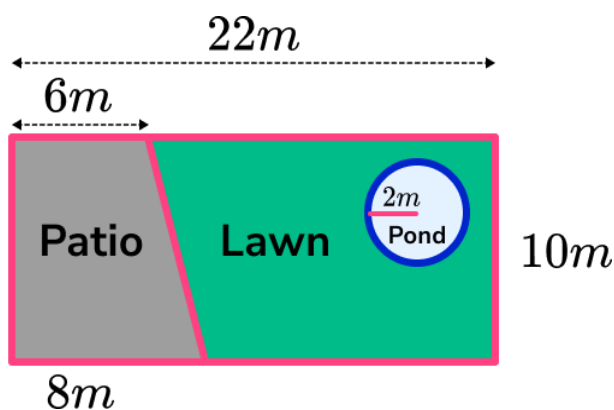
Applied

- 1) (a) Write an expression, in terms of a , for the area of this rhombus.



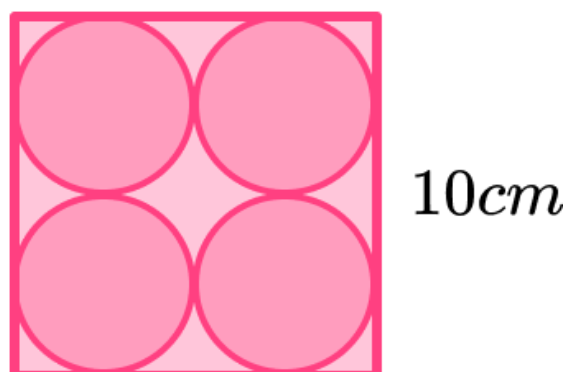
- (b) Given that the area of the rhombus is 450cm^2 , find the value of a .

- 2) (a) Thais wants to buy grass seed to create a lawn area in her garden. Her garden is shown below. Work out the area of her lawn.



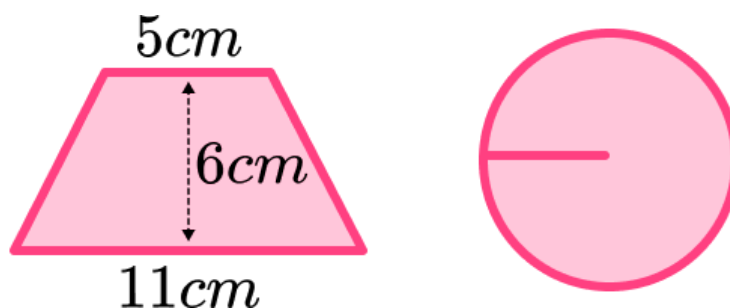
- (b) Each box of seed costs £3.99 and covers 20m^2 . How much will it cost Thais to buy enough seed for her lawn?

- 3) Find the shaded area.



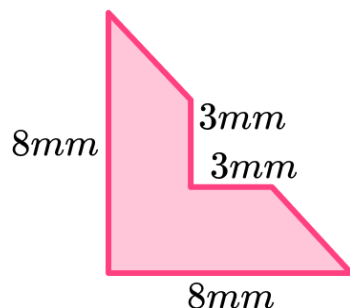
How to work out area - Worksheet

- 4) These shapes have the same area. Calculate the radius of the circle. Give your answer to 1 d.p.



How to work out area - Exam Questions

- 1) Work out the area of the hexagon below:



.....
(3 marks)

- 2) (a) The allowed occupancy of room can be calculated using the following information:

Use of room	Required m ² /person
Standing	0.3
Dancing	0.5
Seated	1.2

Lucy is planning a school disco. The hall measures $16m$ by $9m$. How many people can the hall accommodate for dancing at the disco?

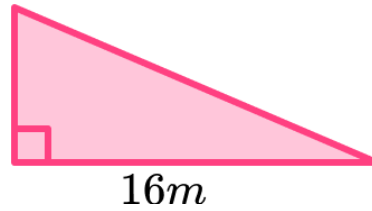
.....
(2)

- (b) Lucy pays £100 to hire the hall. If Lucy sells the maximum number of tickets allowed for £3 each, how much profit will she make?

.....
(2)
(4 marks)

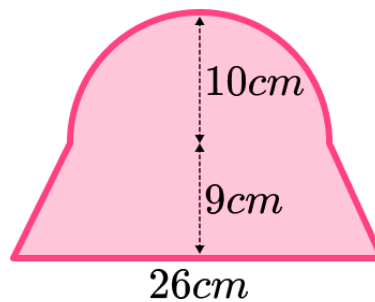
How to work out area - Exam Questions

- 3) The area of this triangle is $40m^2$. Work out the height of the triangle.




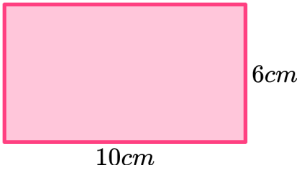

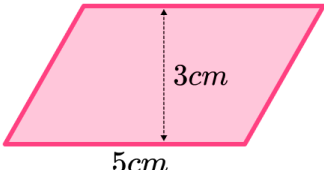
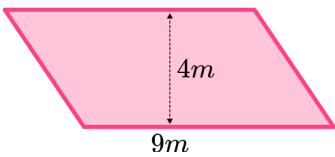
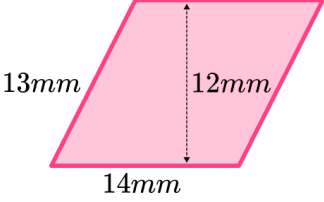
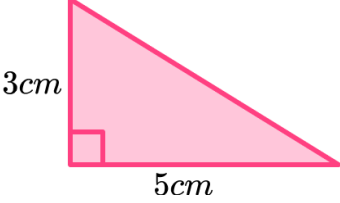
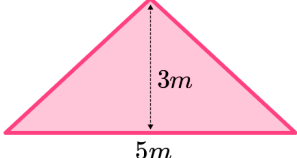
.....
(3 marks)

- 4) Work out the area of this shape:

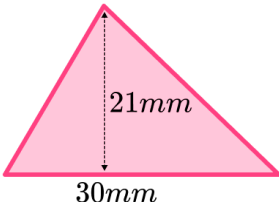
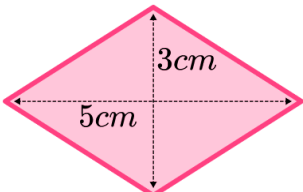
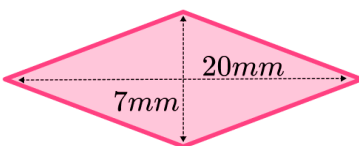
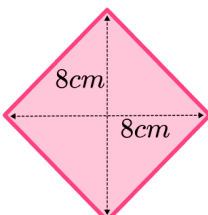
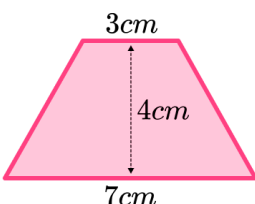
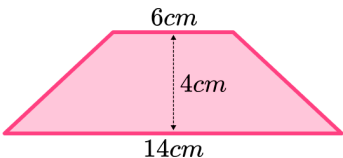
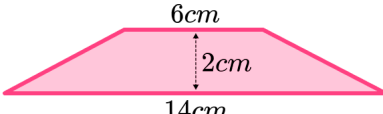
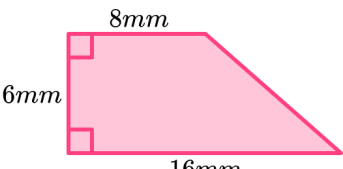


.....
(5 marks)

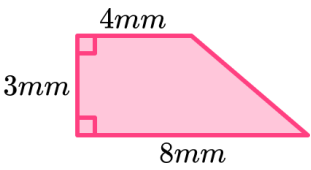
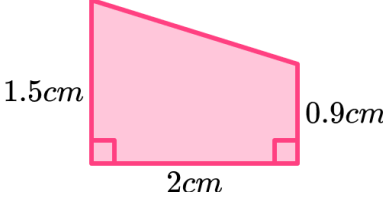
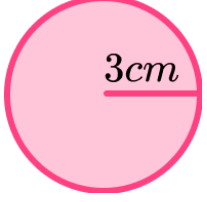
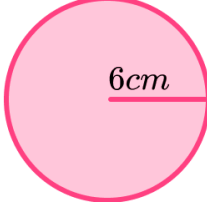
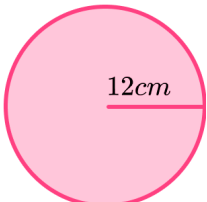
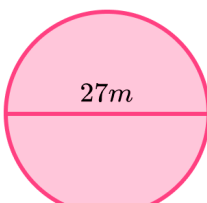

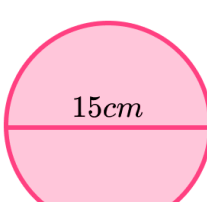
How to work out area - Answers

	Question	Answer
	Skill Questions	
Group A	<p>Work out the area of each shape</p> <p>1) </p> <p>2) </p> <p>3) </p> <p>4) </p> <p>5) </p> <p>6) </p> <p>7) </p> <p>8) </p>	<p>1) 15cm^2</p> <p>2) 60cm^2</p> <p>3) 30cm^2</p> <p>4) 15cm^2</p> <p>5) 36m^2</p> <p>6) 168mm^2</p> <p>7) 7.5cm^2</p> <p>8) 7.5m^2</p>

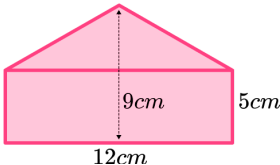
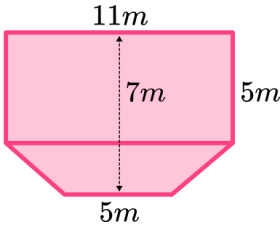
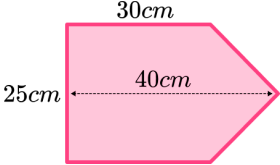
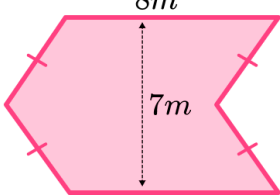
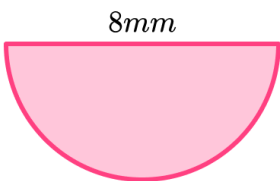
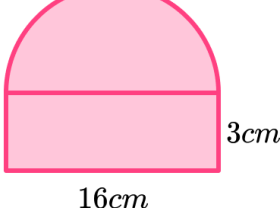
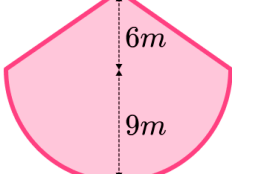
How to work out area - Answers

Group A contd	<p>9) </p> <p>10) </p> <p>11) </p> <p>12) </p>	<p>9) $315mm^2$</p> <p>10) $7.5cm^2$</p> <p>11) $70mm^2$</p> <p>12) $32cm^2$</p>
Group B	<p>Work out the area of each shape</p> <p>1) </p> <p>2) </p> <p>3) </p> <p>4) </p>	<p>1) $20cm^2$</p> <p>2) $40cm^2$</p> <p>3) $20cm^2$</p> <p>4) $72mm^2$</p>

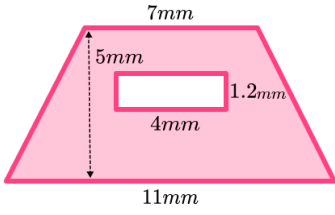
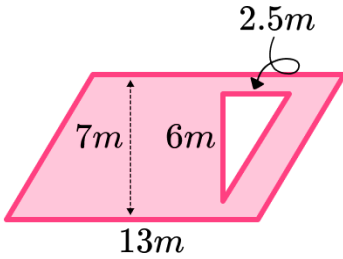
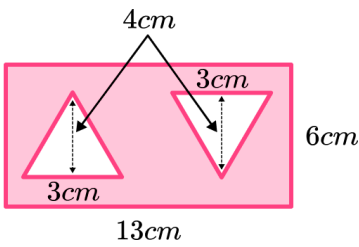
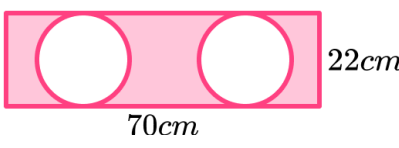
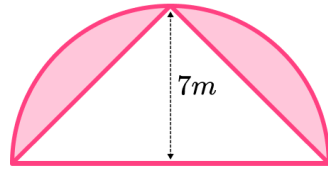
How to work out area - Answers

Group B contd	5)		5) 18mm^2
	6)		6) 2.4cm^2
	7)		7) 28.3cm^2
	8)		8) 113.1cm^2
	9)		9) 452.4cm^2
	10)		10) 572.6m^2
	11)		11) 11.9mm^2
	12)		12) 176.7cm^2

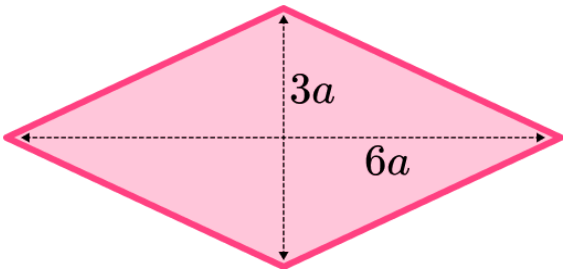
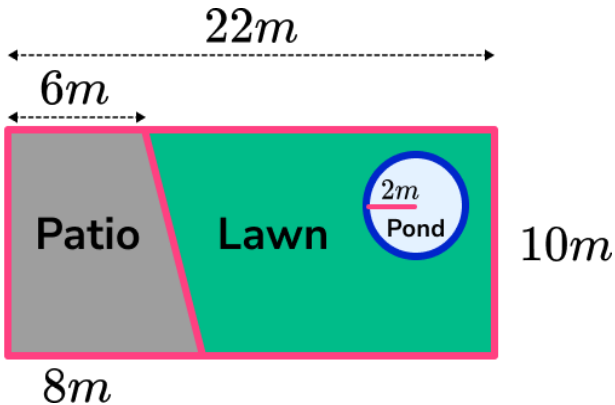
How to work out area - Answers

Group C	Work out the area of each shape	
	<p>1)</p> 	<p>1) 84cm^2</p>
	<p>2)</p> 	<p>2) 71m^2</p>
	<p>3)</p> 	<p>3) 875cm^2</p>
	<p>4)</p> 	<p>4) 56m^2</p>
	<p>5)</p> 	<p>5) 25.1mm^2</p>
	<p>6)</p> 	<p>6) 148.5cm^2</p>
	<p>7)</p> 	<p>7) 181.2m^2</p>

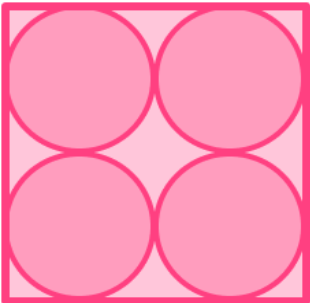
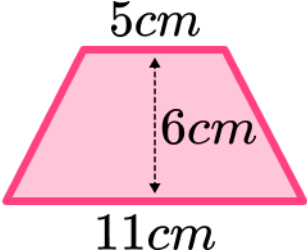
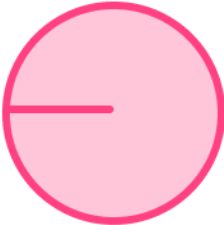
How to work out area - Answers

Group C contd	<p>8) </p> <p>9) </p> <p>10) </p> <p>11) </p> <p>12) </p>	<p>8) 40.2mm^2</p> <p>9) 83.5m^2</p> <p>10) 66cm^2</p> <p>11) 779.7cm^2</p> <p>12) 28.0m^2</p>
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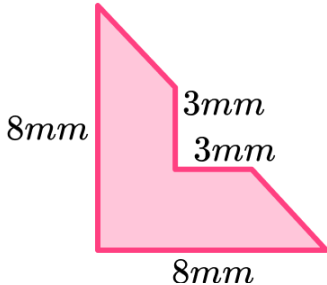
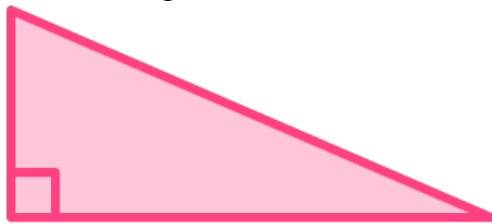
How to work out area - Answers

	Question	Answer
	Applied Questions	
1)	<p>a) Write an expression, in terms of a, for the area of this rhombus.</p> 	a) $9a^2$
	<p>b) Given that the area of the rhombus is 450cm^2, find the value of a.</p>	b) 7.07cm
2)	<p>a) Thais wants to buy grass seed to create a lawn area in her garden. Her garden is shown below. Work out the area of her lawn.</p> 	a) 137.4m^2
	<p>b) Each box of seed costs £3.99 and covers 20m^2. How much will it cost Thais to buy enough seed for her lawn?</p>	b) £27.93

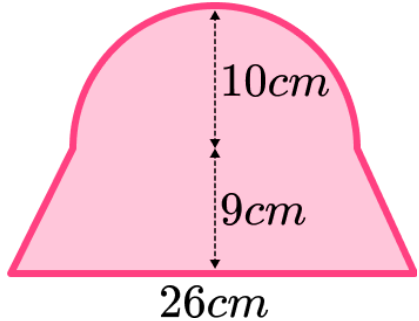
How to work out area - Answers

3)	<p>Find the shaded area</p>  <p>10cm</p>	21.5cm^2
4)	<p>These shapes have the same area. Calculate the radius of the circle. Give your answer to 1 d.p.</p>  	3.9cm

How to work out area - Mark Scheme

	Question	Answer									
	Exam Questions										
1)	Work out the area of the hexagon below: 	Big triangle: $\frac{1}{2} \times 8 \times 8 = 32mm^2$ Small triangle: $\frac{1}{2} \times 3 \times 3 = 4.5mm^2$ $32 - 4.5 = 27.5mm^2$	(1) (1) (1)								
2) (a)	The allowed occupancy of room can be calculated using the following information: <table border="1" data-bbox="314 952 833 1240"><thead><tr><th>Use of room</th><th>Required m²/person</th></tr></thead><tbody><tr><td>Standing</td><td>0.3</td></tr><tr><td>Dancing</td><td>0.5</td></tr><tr><td>Seated</td><td>1.2</td></tr></tbody></table> Lucy is planning a school disco. The hall measures 16m by 9m. How many people can the hall accommodate for dancing at the disco?	Use of room	Required m ² /person	Standing	0.3	Dancing	0.5	Seated	1.2	(a) $16 \times 9 = 144$ $144 \div 0.5 = 288$	(1) (1)
Use of room	Required m ² /person										
Standing	0.3										
Dancing	0.5										
Seated	1.2										
(b)	Lucy pays £100 to hire the hall. If Lucy sells the maximum number of tickets allowed for £3 each, how much profit will she make?	(b) $288 \times 3 = £864$ $£864 - £100 = £764$	(1) (1)								
3)	The area of this triangle is 40m ² . Work out the height of the triangle. 	$\frac{1}{2} \times 16 \times h = 40$ $8h = 40$ $h = 5m$	(1) (1) (1)								

How to work out area - Mark Scheme

4)	<p>Work out the area of this shape</p> 	<p>Top of trapezium = 20cm</p> <p>Area of trapezium: $\frac{1}{2} (20 + 26) \times 9 = 207cm^2$</p> <p>Area of semi-circle: $\frac{\pi \times 10^2}{2}$</p> <p>Area of semi-circle: $157.08cm^2$</p> <p>Total area: $207 + 157.08 = 364.08cm^2$</p>	<p>(1)</p> <p>(1)</p> <p>(1)</p> <p>(1)</p> <p>(1)</p>
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