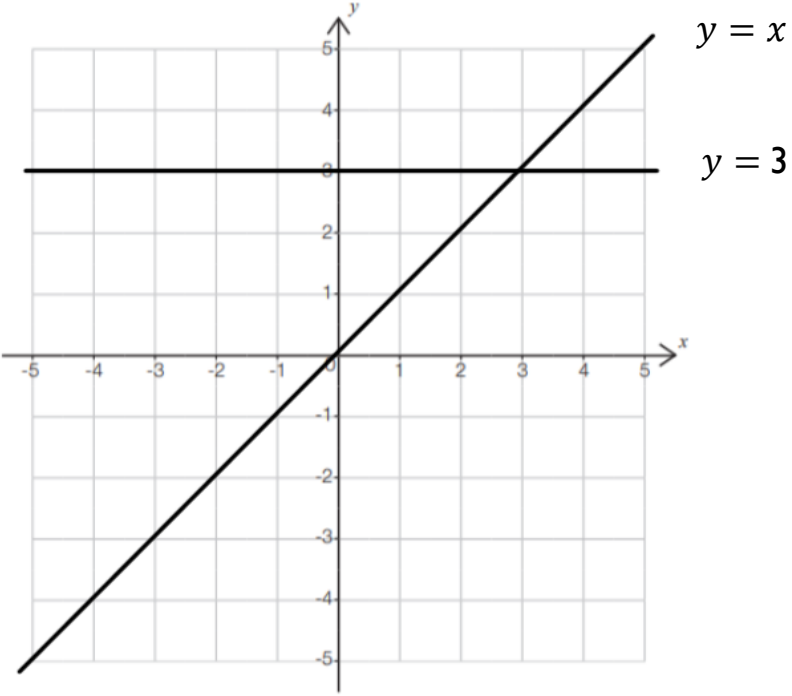
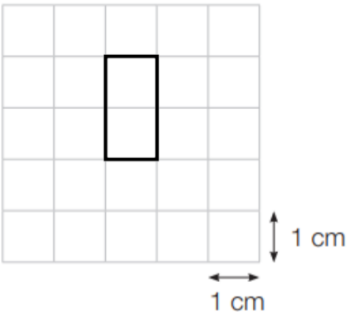
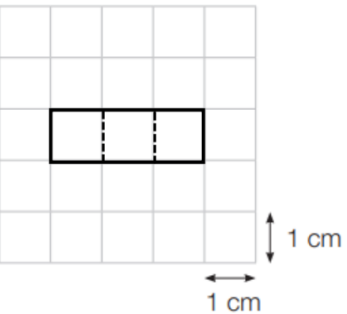


# Year 9 Autumn Core Mark Scheme

Question	Answer	Marks	Notes and guidance
1	<p>Draws correct graphs as shown</p> 	1	<p>Award 1 mark for <math>y = x</math> correct. Condone no label and slight inaccuracy if the intention is clear.</p> <p>Award 1 mark for <math>y = 3</math> correct. Condone no label and slight inaccuracy if the intention is clear.</p>
	(3, 3)	1	<p>Follow through their point of intersection provided at least one graph is of the correct form.</p>

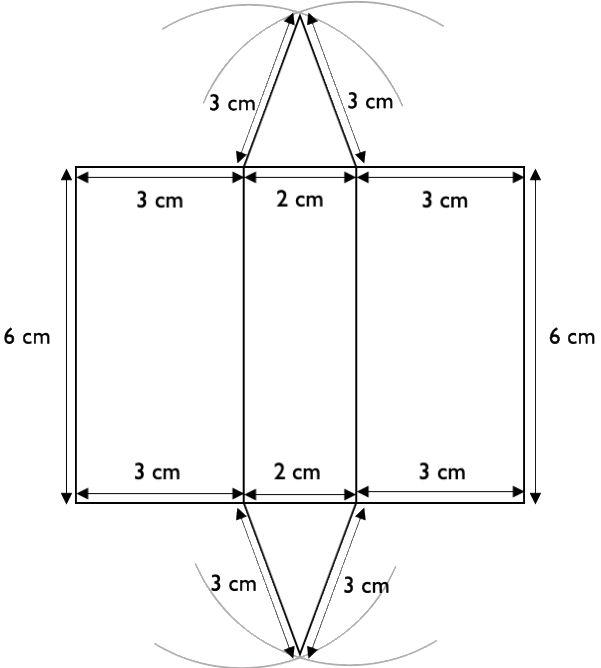
# Year 9 Autumn Core Mark Scheme

2	Indicates $9 + 2a = 23$	1	Accept any clear indication – circle, underlined etc.
	$t = 3$	3	Award 2 marks for fully correct method with one arithmetical error Award 1 mark for correct first step e.g. $5t - 12 = 3$ or $7t - 15 = 2t$
	$w > 1$	2	Award 1 mark for evidence of correct method e.g. multiplying out brackets and rearranging, or dividing both sides by 3, or $w = 1$
3	Draws a rectangle 1 cm by 2 cm e.g. 	1	Allow anywhere on the grid.
	Draws correct plan view e.g. 	1	Allow anywhere on the grid.

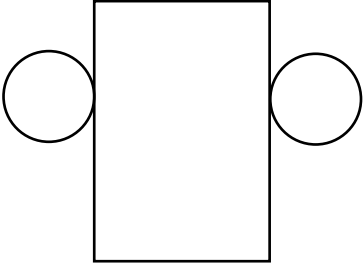
# Year 9 Autumn Core Mark Scheme

4	Draws accurate perpendicular bisector of AB with construction lines clearly visible	2	Award 1 mark for any correct method if incomplete, or within 2 mm.										
5	$5x + 15 - 2x + 8$ $\equiv 3x + 23$	3	Award 1 mark for each correct expansion, 3 <sup>rd</sup> mark for complete simplification.										
	$x^2 + 3x + 4x + 12$ $x^2 + 7x + 12$	2	Award 1 mark for any three terms correct.										
6	Completes table correctly <table border="1" data-bbox="383 579 1122 935" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Equation</th> <th>Graph</th> </tr> </thead> <tbody> <tr> <td><math>y = 3x + 2</math></td> <td>A</td> </tr> <tr> <td><math>y = 3x - 2</math></td> <td>C</td> </tr> <tr> <td><math>y = -3x + 2</math></td> <td>B</td> </tr> <tr> <td><math>y = -3x - 2</math></td> <td>D</td> </tr> </tbody> </table>	Equation	Graph	$y = 3x + 2$	A	$y = 3x - 2$	C	$y = -3x + 2$	B	$y = -3x - 2$	D	2	Award 1 mark for two correct.
	Equation	Graph											
$y = 3x + 2$	A												
$y = 3x - 2$	C												
$y = -3x + 2$	B												
$y = -3x - 2$	D												
7	Indicates true with fully correct working e.g. $105 \div 15 = 7$ Both rectangles are 15 cm by 7 cm so they are congruent	2	Award 1 mark for attempt to find unknown length in either rectangle.										

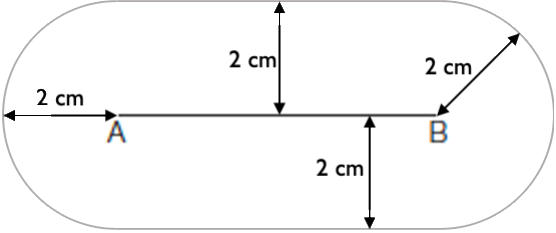
# Year 9 Autumn Core Mark Scheme

8	$a = \frac{c+b}{2}$	2	<p>Accept any equivalent form e.g. <math>a = \frac{c}{2} + \frac{b}{2}</math></p> <p>Award 1 mark for correct first step e.g.</p> $2a = b + c \text{ or } a - \frac{b-c}{2}$
9	(0, 1)	1	
	3	1	Do not accept e.g. $\frac{6}{2}$
10	<p>Fully correct net with correct dimensions e.g.</p> 	3	<p>Award 2 marks for</p> <ul style="list-style-type: none"> <li>• correct shape and at least all rectangles correct</li> </ul> <p>or</p> <ul style="list-style-type: none"> <li>• correct shape and triangles correct.</li> </ul> <p>Award 1 mark for</p> <ul style="list-style-type: none"> <li>• correct shape</li> </ul> <p>or</p> <ul style="list-style-type: none"> <li>• at least one correct face.</li> </ul>

# Year 9 Autumn Core Mark Scheme

11	<p>Draws any correct net for a cylinder e.g.</p> 	1	
	33 929 or $10\,800\pi$	3	<p>Allow rounding to 3sf or better. Award 2 marks for fully correct method.</p> <p>Award 1 mark for at least one correct area e.g. <math>\pi \times 40^2</math> or <math>\pi \times 80 \times 95</math> seen or implied.</p>
12	120	4	<p>Award 1 mark for correct process to find volume e.g. <math>144 \times 25 \times 250</math></p> <p>Award 1 mark for converting either volume of pool to litres or volume of bucket to litres</p> <p>Award 1 mark for (their volume of the pool) divided by (their volume of 1 bucket).</p>

# Year 9 Autumn Core Mark Scheme

	e.g. the locus of the points from the endpoints should be semicircles	1	Any reasonable explanation.
13		2	<p>Award two marks for correct locus 2 cm away from AB.</p> <p>Award 1 mark for correct shape.</p>