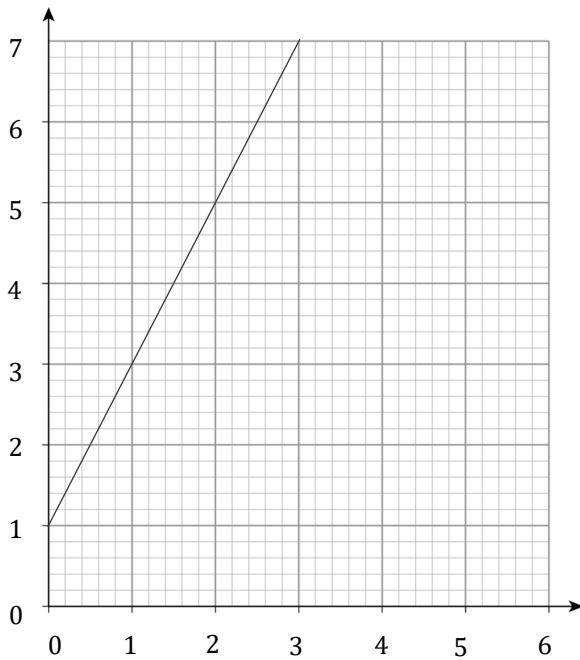


### Drawing Straight Line Graphs Mark Scheme

**1**

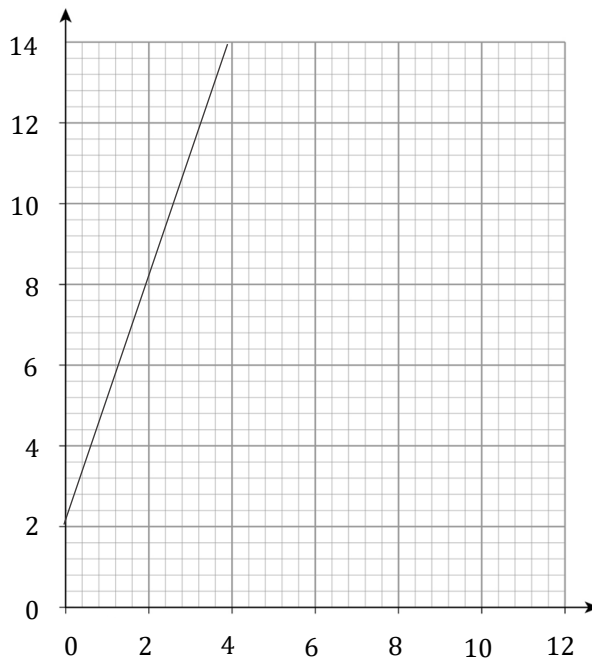


[1] Straight line drawn crossing the  $y$ -axis at  $y = 1$

[1] gradient of 2 ( for every 1 across line should go up by 2)

[1] both correct thus line of  $y = 2x + 1$  drawn accurately

**2**



[1] Straight line drawn crossing the  $y$ -axis at  $y = 2$

[1] gradient of 3 ( for every 1 across line should go up by 3)

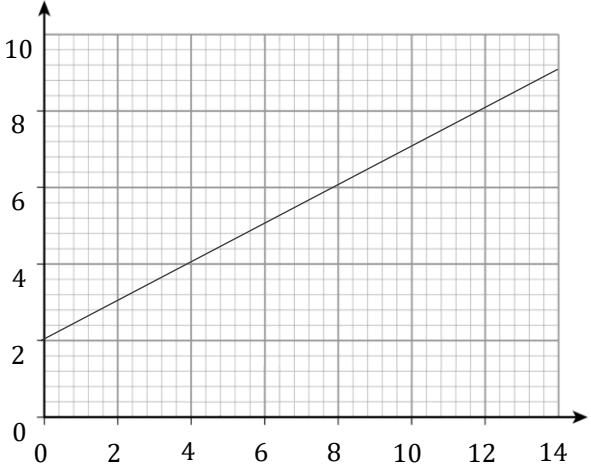
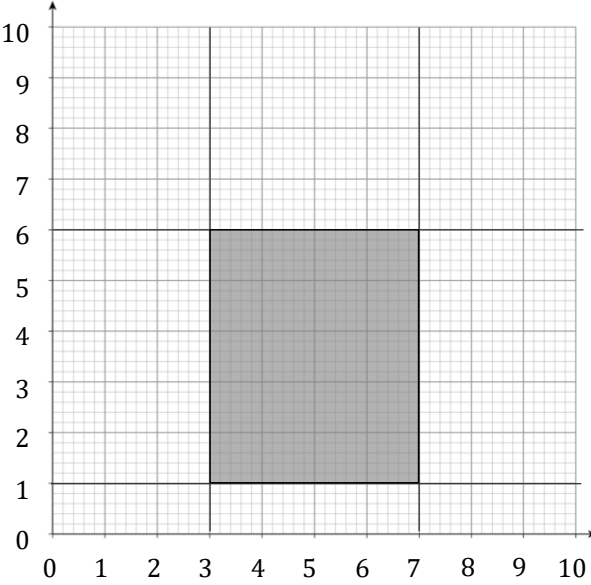
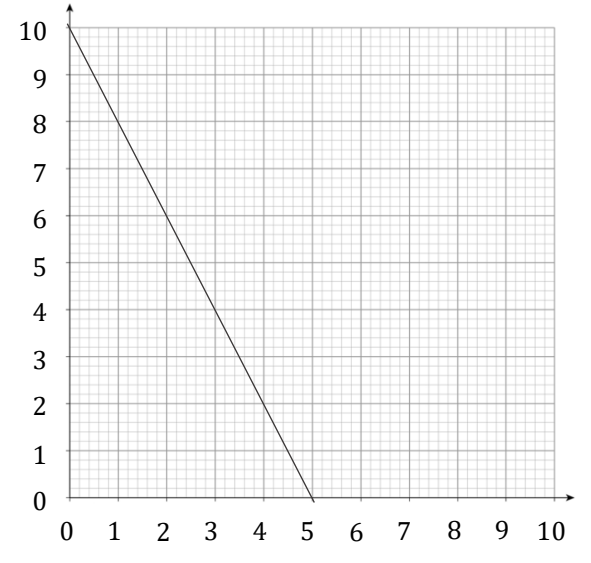
[1] both correct thus line of  $y = 3x + 2$  drawn accurately

**3**

$x$	$y$
0	2
4	4
8	6
12	8

[1] For completion of table

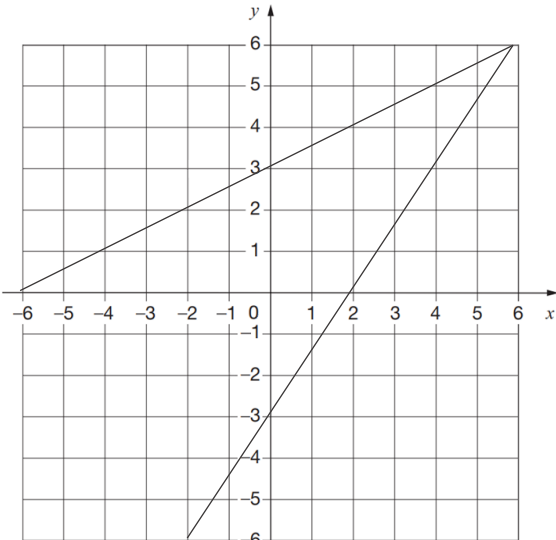
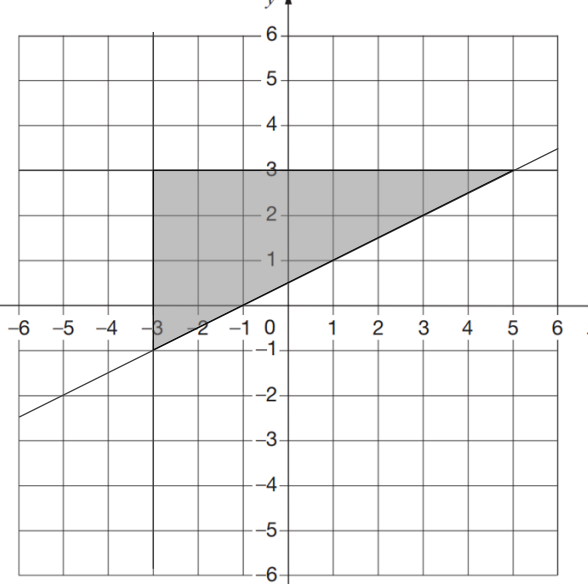
Turn over ►

3		<p>[1] Straight line drawn crossing the <math>y</math>-axis at <math>y = 2</math></p> <p>[1] Gradient of <math>\frac{1}{2}</math> ( for every 1 across line should go up by <math>\frac{1}{2}</math>)</p> <p>[1] Both correct thus line of <math>y = \frac{1}{2}x + 2</math> drawn accurately</p>
4		<p>[4] Award mark per correct line drawn</p>
	<p>Area of shape (<math>4 \times 5 = 20</math>) Answer = <math>20 \text{ cm}^2</math></p>	<p>[1] If drawn incorrectly award mark if correctly calculated from student diagram</p>
5		<p>[1] Straight line drawn crossing the <math>y</math>-axis at <math>y = 10</math></p> <p>[1] gradient of <math>-5</math> ( for every 1 across line should go down by 5)</p> <p>[1] both correct thus line of <math>y = -2x + 10</math> drawn accurately</p>

Turn over ►

<p>6</p>		<p>[1] correctly plotted line</p> <p>[1] identifying the y-intercept as <math>-1.5</math></p>
<p>7(a)</p>	<p>The equation of the line was interpreted incorrectly as it was not arranged into the form <math>y = mx + c</math> i.e. Adam incorrectly assumed the gradient was <math>-2</math></p>	<p>[1] Correct statement</p>
<p>7(b)</p>	<p>Adam has in fact plotted the line <math>y = -2x + 3</math></p>	<p>[1] Actual line drawn</p>
<p>7(c)</p>		<p>[1] Straight line drawn crossing the y-axis at <math>y = 3</math></p> <p>[1] gradient of <math>+2</math> ( for every 1 across line should go up by 2)</p>

Turn over ►

8(a)		<p>[1] Straight line drawn crossing the y-axis at <math>y = -3</math></p> <p>[1] Same line drawn with a gradient of <math>+ 1.5</math> ( for every 1 across line should go up by 1.5)</p> <p>[1] Straight line drawn crossing the y-axis at <math>y = +3</math></p> <p>[1] Same line drawn with a gradient of <math>+ 0.5</math> ( for every 1 across line should go up by 0.5)</p>
8(b)	The two lines intersect at the co-ordinates (6,6)	[1]
9(a)		<p>[1] for <math>x = -3</math> line</p> <p>[1] for <math>y = 3</math> line</p> <p>[1] for rearranging to <math>y = \frac{1}{2}x + \frac{1}{2}</math></p> <p>[1] for plotting <math>y = \frac{1}{2}x + \frac{1}{2}</math> line</p>
9(b)	Any co-ordinate that is inside the region bounded by the lines e.g. $(-2,1)$	[1]

END