

Oxford Revise | Edexcel GCSE Maths Foundation | Answers

Chapter 8 Straight line graphs

Question	Answer	Extra information	Marks												
8.1 (a)	Gradient = $6 \div 3 = 2$	Using $\frac{\text{change in } y}{\text{change in } x}$ with any correct values Correct answer	1 1												
8.1 (b)	Gradient = $2 \div 4 = \frac{2}{4}$ or $\frac{1}{2}$ or 0.5	Using $\frac{\text{change in } y}{\text{change in } x}$ with any correct values Correct answer	1 1												
8.1 (c)	Gradient = $-5 \div 5 = -1$	Using $\frac{\text{change in } y}{\text{change in } x}$ with any correct values Correct answer	1 1												
8.1 (d)	Gradient = $-6 \div 4 = -\frac{6}{4}$ or $\frac{3}{2}$ or -1.5	Using $\frac{\text{change in } y}{\text{change in } x}$ with any correct values Correct answer	1 1												
8.2 (a)	<table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td><i>x</i></td> <td>-1</td> <td>0</td> <td>1</td> <td>2</td> <td>3</td> </tr> <tr> <td><i>y</i></td> <td>-4</td> <td>-1</td> <td>2</td> <td>5</td> <td>8</td> </tr> </table>	<i>x</i>	-1	0	1	2	3	<i>y</i>	-4	-1	2	5	8	1 mark for 2 correct values 2 marks for fully correct answer	1 1
<i>x</i>	-1	0	1	2	3										
<i>y</i>	-4	-1	2	5	8										

Question	Answer	Extra information	Marks
8.2 (b)		<p>At least 3 points plotted correctly</p> <p>Correct graph, with straight line drawn through the points</p>	<p>1</p> <p>1</p>
8.3		<p>At least 3 points plotted correctly</p> <p>Correct graph, with straight line drawn through the points</p>	<p>1</p> <p>1</p>

Question	Answer	Extra information	Marks
8.4		<p>At least 3 points plotted correctly</p> <p>Correct graph, with straight line drawn through the points</p>	<p>1</p> <p>1</p>
8.5	<p>Gradient = $1 \div 1 = 1$</p> <p>$y = x$</p>	<p>Using $\frac{\text{change in } y}{\text{change in } x}$ with any correct values</p> <p>Correct answer</p>	<p>1</p> <p>1</p> <p>1</p>
8.6	$y = -3x$	<p>One mark for the correct gradient.</p> <p>One mark for the correct y-intercept</p> <p>Correct answer</p>	<p>1</p> <p>1</p> <p>1</p>
8.7 (a)	Gradient = 5; y -intercept = 1	<p>Gradient correct</p> <p>y-intercept correct</p>	<p>1</p> <p>1</p>
8.7 (b)	Gradient = -2; y -intercept = 3	<p>Gradient correct</p> <p>y-intercept correct</p>	<p>1</p> <p>1</p>

Question	Answer	Extra information	Marks
8.7 (c)	$y = 0.5x + 3$ Gradient = 0.5; y -intercept = 3	Correctly rearranging Gradient correct y -intercept correct	1 1 1
8.7 (d)	$y = x + 10$ Gradient = 1; y -intercept = 10	Correctly rearranging Gradient correct y -intercept correct	1 1 1
8.7 (e)	$y = -2x + 0.75$ Gradient = -2; y -intercept = 0.75	Correctly rearranging Gradient correct y -intercept correct	1 1 1
8.8	Any line parallel to $y = 4x - 8$ will have a gradient of 4, so any equation of the form $y = 4x + c$, with c a constant.		1
8.9 (a)	Gradient = $\frac{3 - (-1)}{2 - 0} = 2$ Equation is $y = 2x + c$ Substitute in either point, here we use (2, 3): $3 = 4 + c$ $c = -1$ The equation is thus $y = 2x - 1$	Gradient found Using either point to find c . Correct answer	1 1 1

Question	Answer	Extra information	Marks
8.9 (b)	Gradient = $\frac{1-5}{1-(-3)} = -1$ Equation is $y = -x + c$ Substitute in either point, here we use (1, 1): $1 = -1 + c$ $c = 2$ The equation is thus $y = -x + 2$	Gradient found Using either point to find c . Correct answer (accept $y = 2 - x$)	1 1 1
8.10	$y = 4 - 3x$ has a gradient of -3 Rewrite $3x + y = 0$ as $y = -3x$ This also has a gradient of -3 , so Sajid is correct.	Rearranging Gradient = -3 Yes, with correct explanation	1 1 1
8.11 (a)	Gradient = -1 Line crosses the y -axis at (0, 3), so the equation is $y = -x + 3$	Identify gradient Identify y -intercept Correct equation	1 1 1
8.11 (b)	When $x = 97$, $y = -97 + 3 = -94$ Thus, the point with coordinates (97, -100) will not be on the line.	Substituting $x = 97$ or $y = 100$ Correct conclusion with explanation	1 1

Questions referring to previous content

8.12	5 feet = 60 inches 68 inches = 5 feet 8 inches	5 feet Correct answer	1 1	
8.13	Lin's class: $\frac{6}{25} = 24\%$ Jay's class: $\frac{8}{32} = 25\%$ Lin is incorrect. The percentage in Jay's class is slightly higher.	Finding either 24% or 25% Complete, correct explanation	1 1	