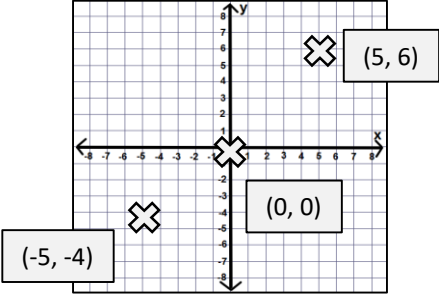
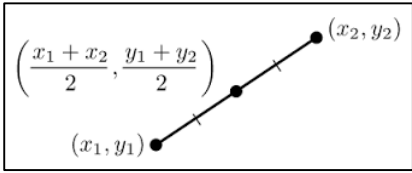


Year 9 – Maths – Autumn 1

Unit 1 - coordinates

No.	Question	Answer	Example
1.1	Coordinates are always	(x, y) "along the corridor and up the stairs"	
1.2	Midpoint of a line	$\left(\frac{x_1+x_2}{2}, \frac{y_1+y_2}{2}\right)$	

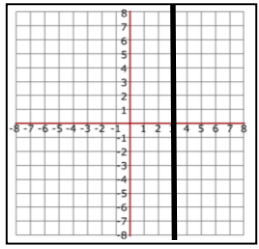
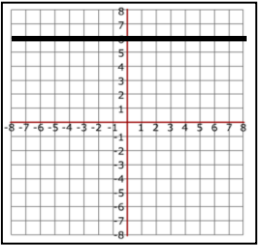
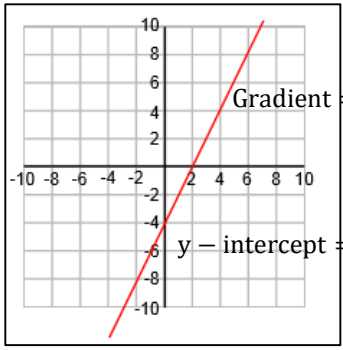
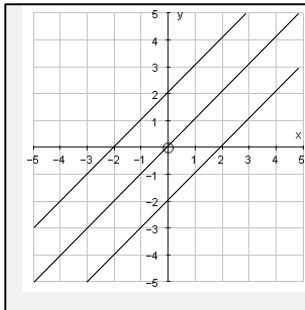
Unit 3 - proportion

No.	Question	Answer	Example
3.1	Direct proportion	As one variable increases, the other variable increases	
3.2	Indirect proportion	As one variable increases, the other variable decreases	
3.3	The unitary method	Find one first	

Unit 4 – standard form

No.	Question	Answer	Example
4.1	Standard form	A way of writing very big or very small numbers using powers of 10	4,000,000 is 4×10^6
4.2	10^{-3}	0.001	
4.3	10^{-2}	0.01	
4.4	10^{-1}	0.1	
4.5	10^0	1	
4.6	10^1	10	
4.7	10^2	100	
4.8	10^3	1000	

Unit 2 – y = mx + c

No.	Question	Answer	Example
2.1	Vertical lines are always	$x = \dots$ where all the x coordinates are the same	
2.2	Horizontal lines are always	$y = \dots$ where all the y coordinates are the same	
2.3	m	Gradient	<i>Example: $y = 2x - 4$</i> 
2.4	To find the gradient	"rise over run" $\frac{\text{Difference in } y}{\text{Difference in } x} = \frac{y_2 - y_1}{x_2 - x_1}$	
2.5	c	Y intercept	
2.6	To find the y-intercept	The y coordinate when $x = 0$ This is where the line crosses the y axis	
2.7	Parallel lines	Have the same gradient	
2.8	Perpendicular lines	$-\frac{1}{\text{gradient}}$	