

Question	Scheme	Marks	AOs
1 <u>Way 1</u>	Uses $y = mx + c$ with both (3, 1) and (4, -2) and attempt to find m or c	M1	1.1b
	$m = -3$	A1	1.1b
	$c = 10$ so $y = -3x + 10$ o.e.	A1	1.1b
		(3)	
Or <u>Way 2</u>	Uses $\frac{y - y_1}{x - x_1} = \frac{y_2 - y_1}{x_2 - x_1}$ with both (3, 1) and (4, -2)	M1	1.1b
	Gradient simplified to -3 (may be implied)	A1	1.1b
	$y = -3x + 10$ o.e.	A1	1.1b
		(3)	
Or <u>Way 3</u>	Uses $ax + by + k = 0$ and substitutes both $x = 3$ when $y = 1$ and $x = 4$ when $y = -2$ with attempt to solve to find a , b or k in terms of one of them	M1	1.1b
	Obtains $a = 3b$, $k = -10b$ or $3k = -10a$	A1	1.1b
	Obtains $a = 3$, $b = 1$, $k = -10$ Or writes $3x + y - 10 = 0$ o.e.	A1	1.1b
		(3)	

(7 marks)

Notes:

M1: Need correct use of the given coordinates

A1: Need fractions simplified to -3 (in ways 1 and 2)

A1: Need constants combined accurately

N.B. Answer left in the form $(y - 1) = -3(x - 3)$ or $(y - (-2)) = -3(x - 4)$ is awarded **M1A1A0** as answers should be simplified by constants being collected

Note that a correct answer implies all three marks in this question