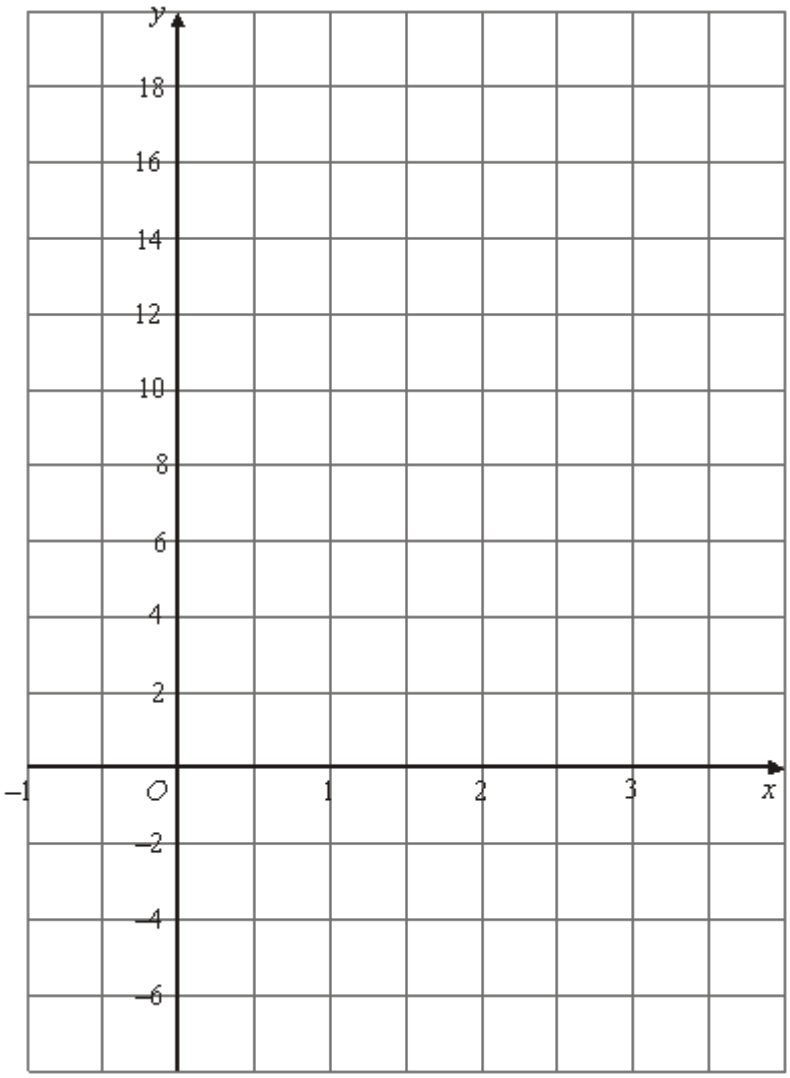
Q1. (a) On the grid, draw the graph of $y = 5x + 1$ from $x = -1$ to $x = 3$



(3)

(b) Which of the following is the equation of a line parallel to $y = 5x + 1$?

A **B** **C** **D** **E**

$y = x + 1$ $5y = x + 1$ $y + 5x = 3$ $y - 5x + 1 = 0$ $y = -\frac{x}{5} + 1$

.....

(1)

(c) Find the equation of the line which is perpendicular to $y = 5x + 1$ and passes through the point (0, 0).

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(2)
(Total 6 marks)

Q2. The line $y = 2x + 3$ meets the line $y = 4x + 2$ at the point P.

Find an equation of the line which is perpendicular to the line $y = 2x + 3$ and which passes through the point P.

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(5)
(Total 5 marks)

M1.

	Working	Answer	Mark	Additional Guidance
(a)	Table of values $x = -1$ 0 1 2 3 $y = -4$ 1 6 11 16 **OR** Using $y = mx + c$, gradient = 5, y- intercept = 1	Single line from (–1, –4) to (3, 16)	3	**B3** for a correct single line from (–1, –4) to (3, 16) [B2 for at least 3 correct points plotted and joined with line segments **OR** 3 correct points plotted two of which must be the extremes with no joining **OR** a single line of gradient 5 passing through (0, 1)] B1 for 2 correctly plotted points **OR** a single lie of gradient 5 **OR** a single line passing through (0, 1)
(b)		D	1	**B1** cao

(c)			2	

	Total for Question: 6 marks

M2.

Working	Answer	Mark	Additional Guidance
Eliminate y to get $2x + 3 = 4x + 2$, $x = 0.5$ $y = 4$ **OR** $y = 2x + 3$ and $y = 4x + 2$ drawn correctly on graph paper Perpendicular drawn correctly through (0.5, 4) Intercept found Gradient found	$y = –0.5x + 4.25$	5	**M1** eliminate y **M1** substitute the found value of x in the equation **A1** both answers **M1** an equation of the form $y = mx + c$ with either c correct or m correct or the correct gradient stated **A1** cao **OR** **B1** $y = 2x + 3$ drawn **B1** $y = 4x + 2$ drawn **M1** draws perpendicular through point of intersection **M1** an equation of the form $y = mx + c$ with either c correct or m correct or the correct gradient stated **A1** cao
			Total for Question: 5 marks

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