(a) On the axes opposite, draw the line with equation

(i)
$$v = -x - 1$$

(i)
$$y = -x - 1$$
 (ii) $y - 3x + 8 = 0$

(iii)
$$2y = x + 8$$

(3)

(b) Show, by shading on your graph, the region R defined by the inequalities

$$y \geqslant -x-1$$
 and $y \geqslant 3x-8$ and $2y \leqslant x+8$

(1)

For all points in R, with coordinates (x, y)

$$P = 2y - 3x$$

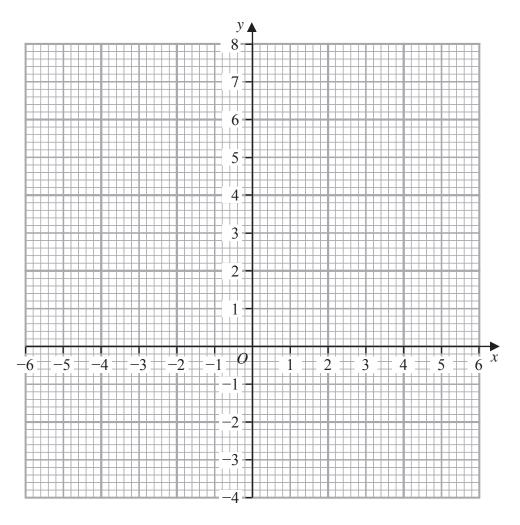
- (c) Find
 - (i) the greatest value of P
 - (ii) the least value of P

(4)





Question 4 continued



Turn over for a spare grid if you need to redraw your graph.



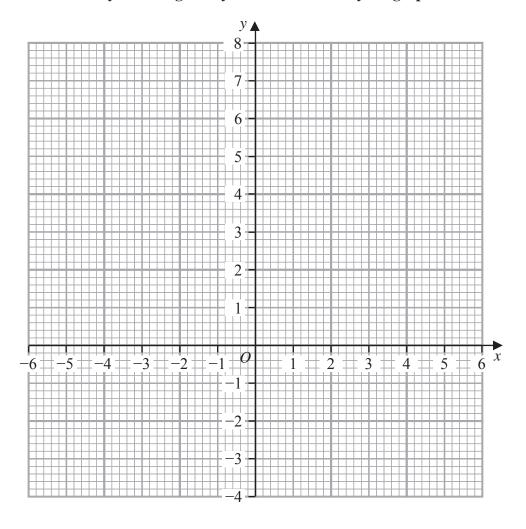
DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

Question 4 continued	

Question 4 continued

Only use this grid if you need to redraw your graph.



(Total for Question 4 is 8 marks)