

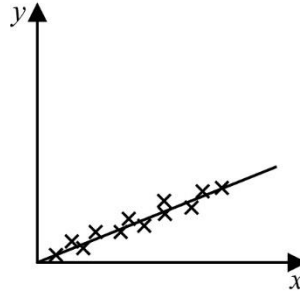
NAME

Time:

Non-Calculator Questions



1 Here is a sketch of a scatter graph.



a Describe the type of correlation shown by the scatter graph.

(1 mark)

b Describe the relationship between  $x$  and  $y$ .

(1 mark)



3 The equation of the line  $L_1$  is  $y = 2x + 5$   
The equation of the line  $L_2$  is  $2y - 4x = 6$   
Show that these two lines are parallel.

(2 marks)

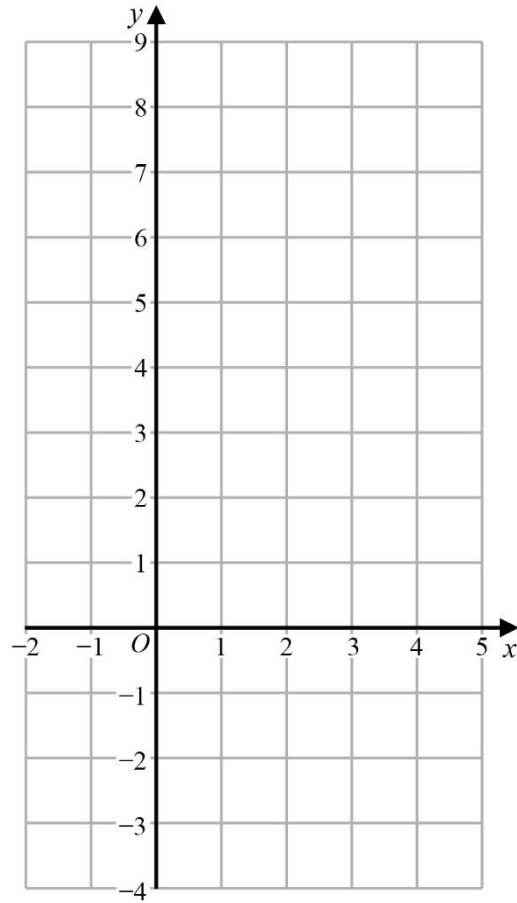


5 Work out an equation of the straight line with gradient 3 that passes through the point with coordinates  $(2, 4)$ .

(3 marks)



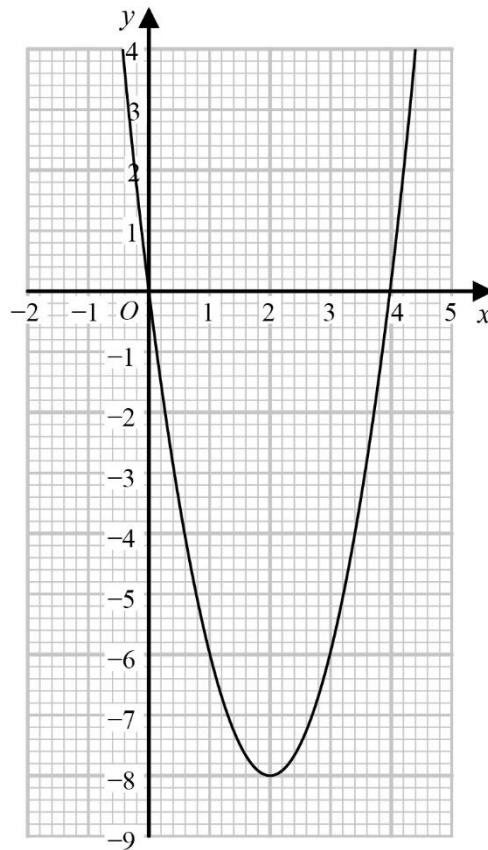
- 7 On the grid, draw the graph with equation  $y = 5 - 2x$  for values of  $x$  from  $-1$  to  $4$ .



(3 marks)



9 Here is the graph of the equation  $y = 2x^2 - 8x$



a What are the coordinates of the minimum point?

(1 mark)

b What is the equation of the line of symmetry for the graph?

(1 mark)

c Use your graph to solve the equation  $2x^2 - 8x = -5$

(2 marks)

d By drawing a straight line on the graph, solve the equation  $2x^2 - 8x = x - 4$

(3 marks)

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**Calculator Questions (30 minutes)**

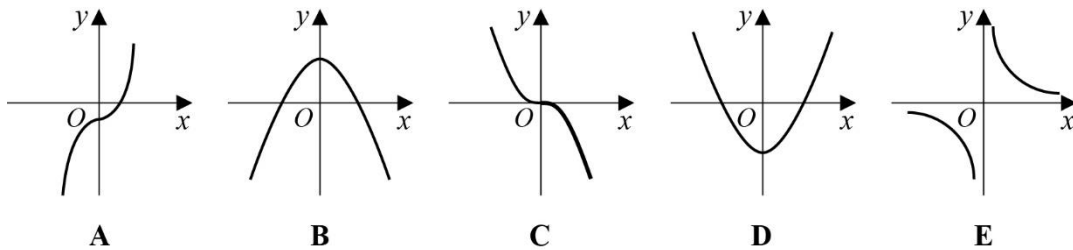


- 11 Point  $A$  has coordinates  $(-3, 7)$   
 Point  $B$  has coordinates  $(5, 10)$   
 Find the coordinates of the midpoint of  $AB$ .

(2 marks)



- 13 Here are sketches of five graphs, A, B, C, D and E.



Match the correct graph letter to each equation.

$y = \frac{1}{x}$

$y = x^2 - 4$

$y = -x^3$

$y = x^3 - 2$

$y = -x^2 + 5$


(3 marks)



- 15 A grid is drawn with 1 cm = 1 unit for the  $x$ -axis and the  $y$ -axis.  
 Find the length of the line segment with end points  $(-2, 4)$  and  $(7, 16)$ .

(3 marks)

Overall mark  /