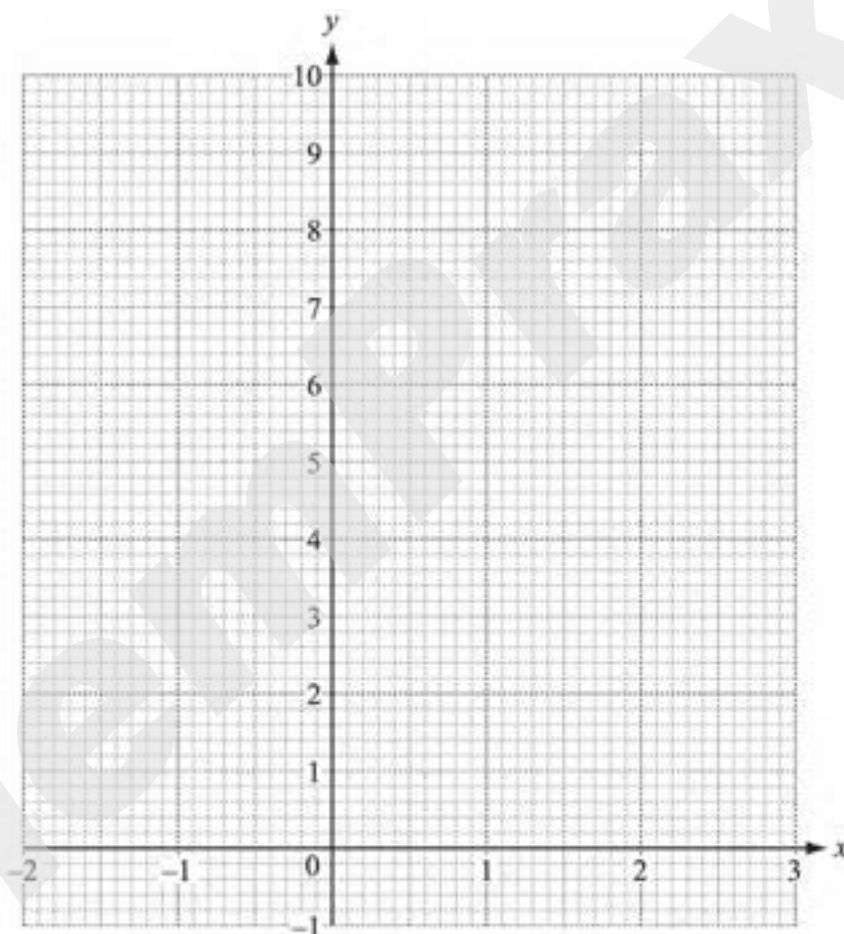


**Coordinate Geometry***(Past Year Topical Questions 2010-2015)*October/November 2011 (43)**Question 2c**

- (c) (i) On the grid, draw the straight line which passes through the points  $(0, 2)$  and  $(3, 8)$ . [1]



(ii) The equation of this line is  $y = mx + 2$ .

Show that the value of  $m$  is 2.

*Answer(c)(ii)*

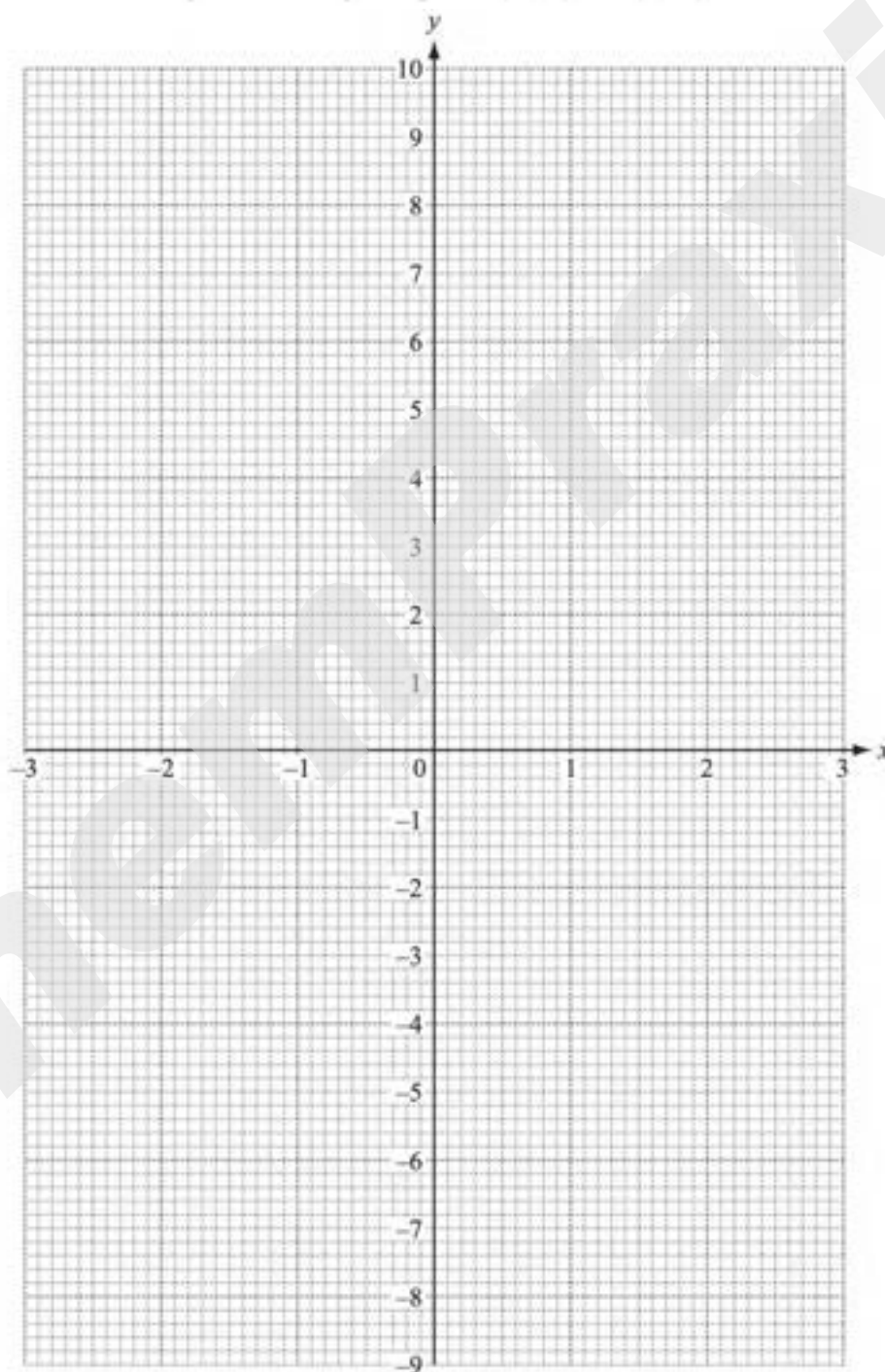
[1]

October/November 2012 (43)

Question 4e

- (e) (i) Draw the straight line through the points  $(-1, 5)$  and  $(3, -9)$ .

[1]



(ii) Find the equation of this line.

*Answer(e)(ii)* ..... [3]

May/June 2013 (42)

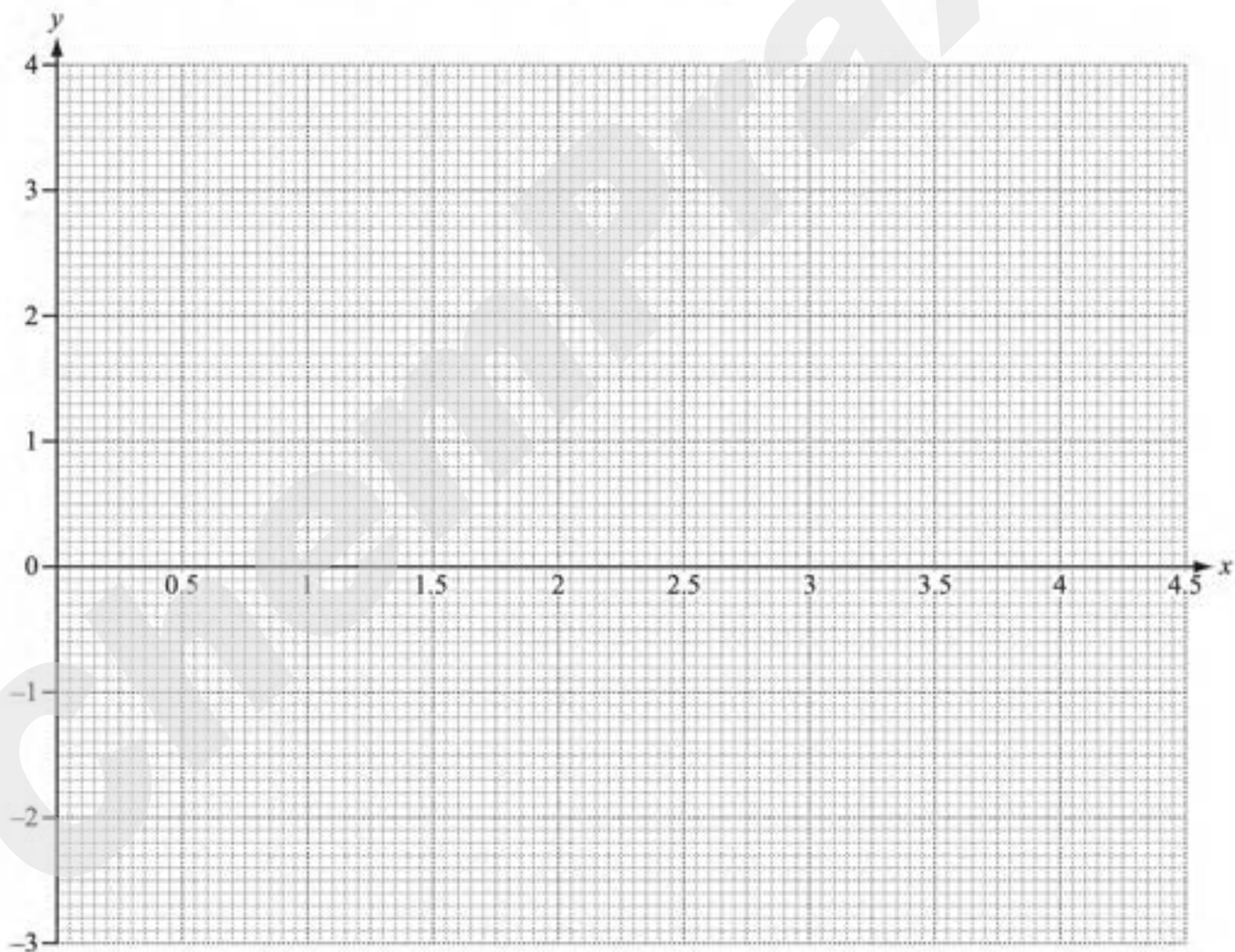
3 The table shows some values for the function  $y = 11x - 2x^2 - 12$  for  $1 \leq x \leq 4.5$ .

$x$	1	1.5	2	2.5	3	3.5	4	4.5
$y$	-3		2	3	3			

(a) Complete the table of values.

[3]

(b) On the grid below, draw the graph of  $y = 11x - 2x^2 - 12$  for  $1 \leq x \leq 4.5$ .



[4]

(d) The line  $y = mx + 2$  is a tangent to the curve  $y = 11x - 2x^2 - 12$  at the point  $P$ .

By drawing this tangent,

(i) find the co-ordinates of the point  $P$ ,

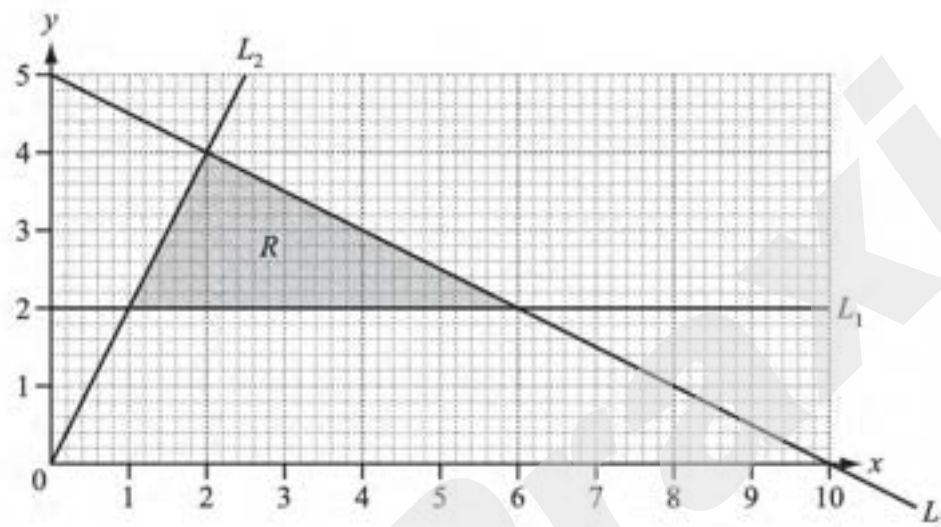
Answer(d)(i) (....., .....) [2]

(ii) work out the value of  $m$ .

Answer(d)(ii)  $m =$  ..... [2]

October/November 2013 (41)

9



(a) Find the equations of the lines  $L_1$ ,  $L_2$  and  $L_3$ .

Answer(a)  $L_1$  .....

$L_2$  .....

$L_3$  ..... [5]

October/November 2013 (43)

7 (a) The co-ordinates of  $P$  are  $(-4, -4)$  and the co-ordinates of  $Q$  are  $(8, 14)$ .

(i) Find the gradient of the line  $PQ$ .

Answer(a)(i) ..... [2]

(ii) Find the equation of the line  $PQ$ .

Answer(a)(ii) ..... [2]

October/November 2014 (43)

8 (a) A straight line joins the points  $(-1, -4)$  and  $(3, 8)$ .

(i) Find the midpoint of this line.

Answer(a)(i) (....., .....) [2]

(ii) Find the equation of this line.  
Give your answer in the form  $y = mx + c$ .

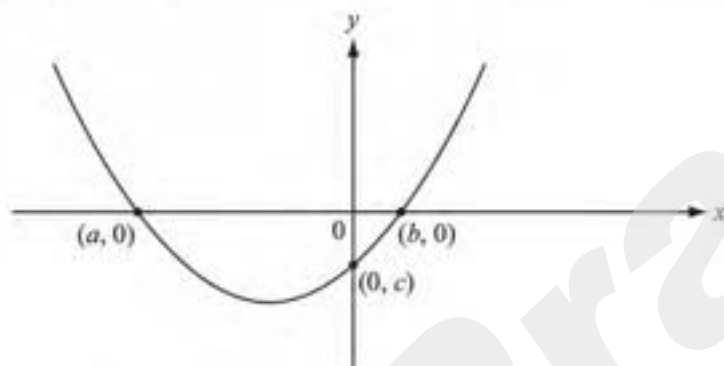
Answer(a)(ii)  $y =$  ..... [3]



(b) (i) Factorise  $x^2 + 3x - 10$ .

Answer(b)(i) ..... [2]

(ii) The graph of  $y = x^2 + 3x - 10$  is sketched below.



Write down the values of  $a$ ,  $b$  and  $c$ .

Answer(b)(ii)  $a =$  .....

$b =$  .....

$c =$  ..... [3]

(iii) Write down the equation of the line of symmetry of the graph of  $y = x^2 + 3x - 10$ .

Answer(b)(iii) ..... [1]

October/November 2015 (41)

**Question 2c**

(iv) Find the equation of the line joining the points (1, 2) and (3, 8).

Answer(c)(iv) ..... [3]

October/November 2015 (42)

8 A line  $AB$  joins the points  $A(3, 4)$  and  $B(5, 8)$ .

(a) Write down the co-ordinates of the midpoint of the line  $AB$ .

Answer(a) ( ..... ) [2]

(b) Calculate the distance  $AB$ .

Answer(b)  $AB =$  ..... [3]

(c) Find the equation of the line  $AB$ .

Answer(c) ..... [3]

(d) A line perpendicular to  $AB$  passes through the origin and through the point  $(6, r)$ .

Find the value of  $r$ .

Answer(d)  $r =$  ..... [3]