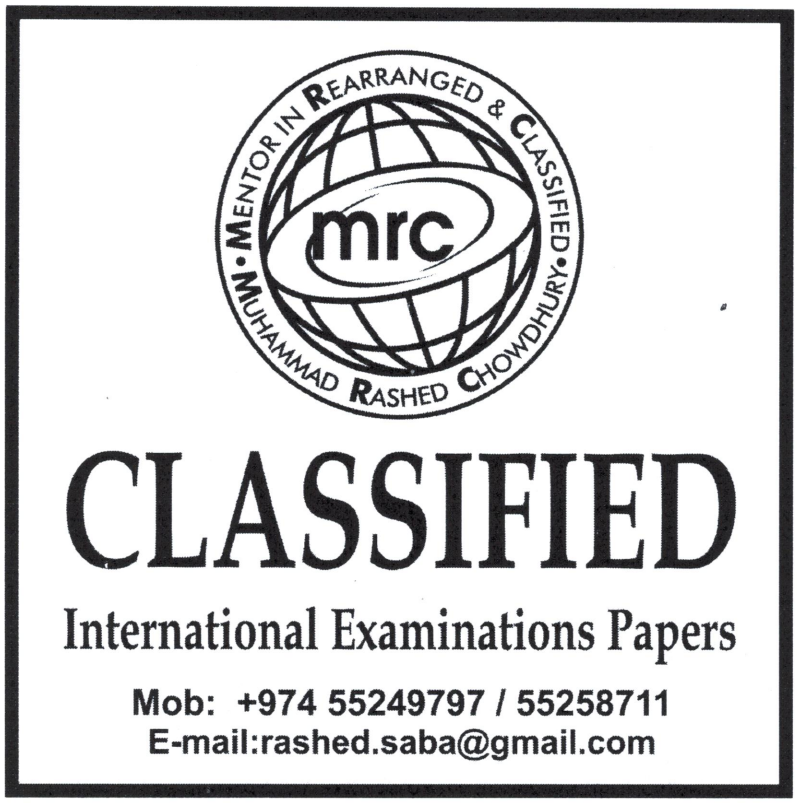


MATHEMATICS -CORE

TOPIC- Straight line graphs

12- N-13

1 The straight line, L, has the equation $y = 5 - 2x$.

Write down

(a) the co-ordinates of the point where the line crosses the y-axis,

Answer(a) (..... , ...) [1]

(b) the gradient of the line,

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

(c) the equation of a line parallel to L.
Give your answer in the form $y = mx + c$.

Answer(c) $y =$ ..... [1]

14-J-15

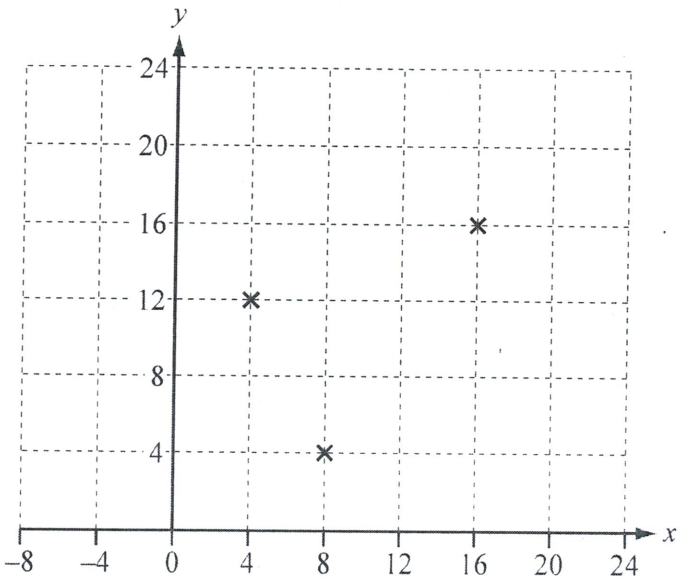
2 **(a)** Write down the co-ordinates of the point where the line $y = 3x + 5$ crosses the y-axis.

Answer(a) (..... , ...) [1]

(b) Write down the equation of a line that is parallel to the line $y = 3x + 5$.

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

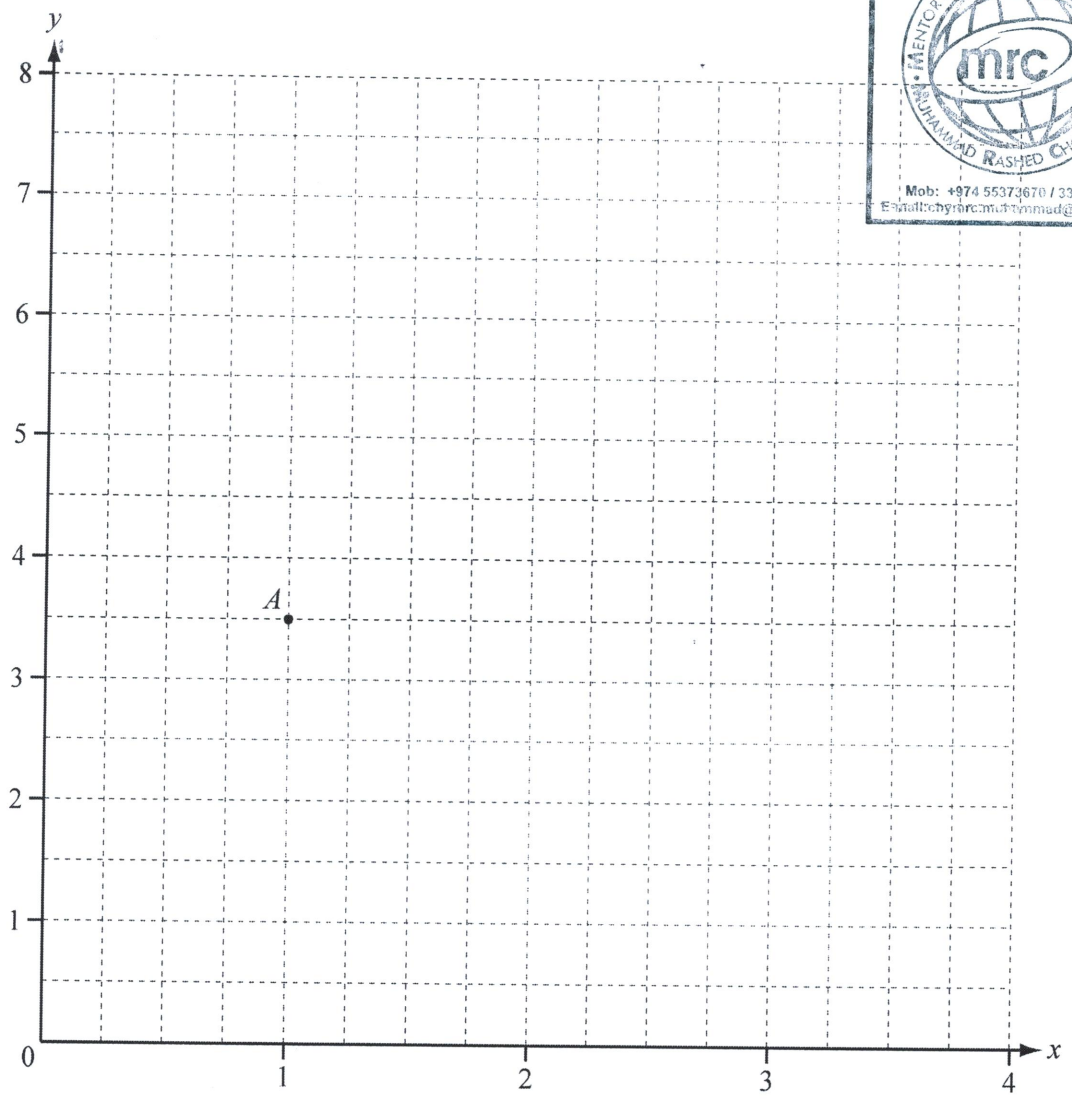
0 3 Three of the vertices of a parallelogram are at (4, 12), (8, 4) and (16, 16).



Write down the co-ordinates of two possible positions of the fourth vertex.

Answer (..... , ...) and (..... , ...) [2]

04



For Examiner's Use

The point $A(1, 3.5)$ is plotted on the grid.

(a) Plot the point $B(3, 6.5)$ and draw the straight line through A and B. [1]

(b) **(i)** Find the gradient of the line in **part (a)**.

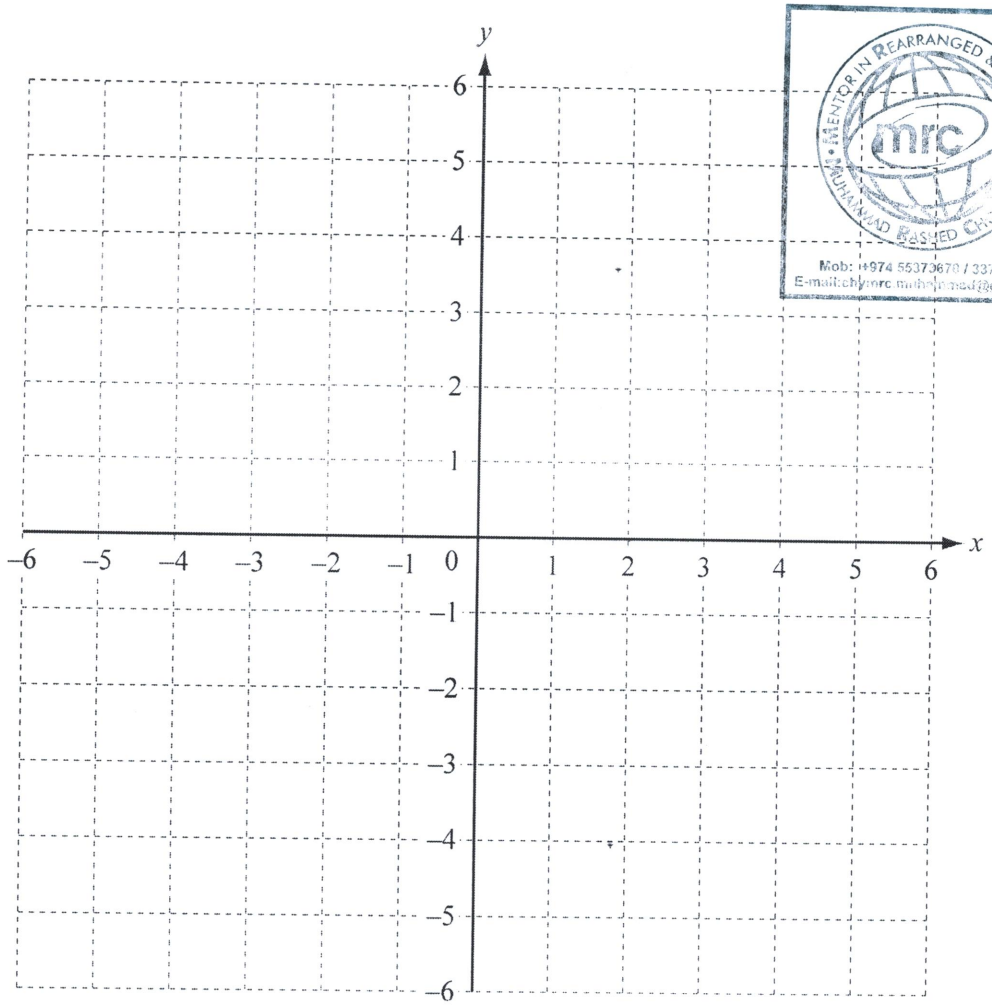
Answer(b)(i) ..... [2]

(ii) Write down the equation of the line in the form $y = mx + c$.

Answer(b)(ii) $y =$ ..... [2]

(c) On the grid, draw a line through the point (2, 5) that is perpendicular to the line in **part (a)**. [1]

05



(a) On the grid, draw the graphs of

(i) $y = 5$, [1]

(ii) $x = -3$. [1]

(b) **(i)** Write down the co-ordinates of the point of intersection of $y = 5$ and $x = -3$.

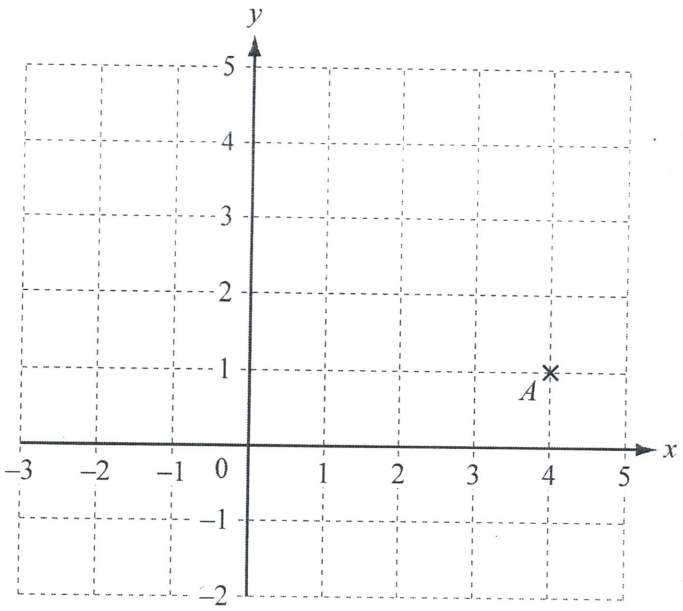
Answer(b)(i) (..... , ...) [1]

(ii) Write down the equation of a line parallel to $y = 5$.

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

11-N-13

For Examiner's Use

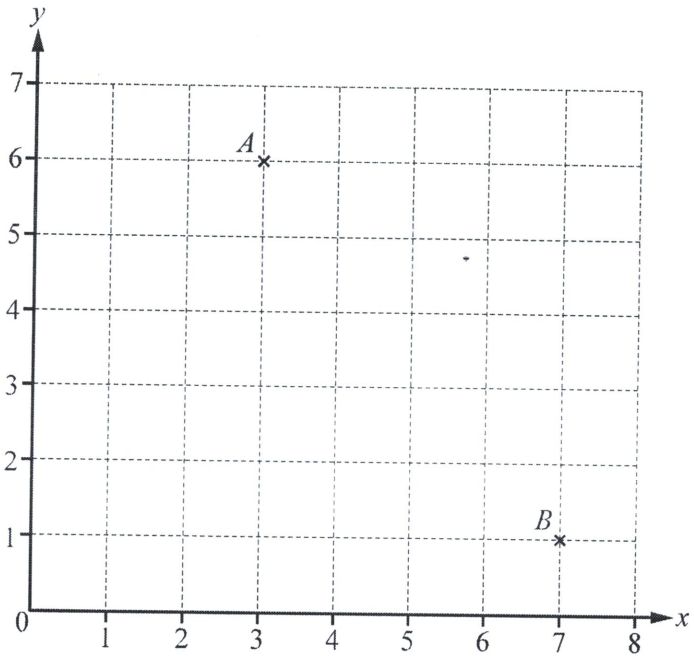


(a) Write down the co-ordinates of point A.

Answer(a) (..... , ...) [1]

(b) On the grid, plot the point (–1, 3). [1]

07



Point A has co-ordinates (3, 6).

(a) Write down the co-ordinates of point B.

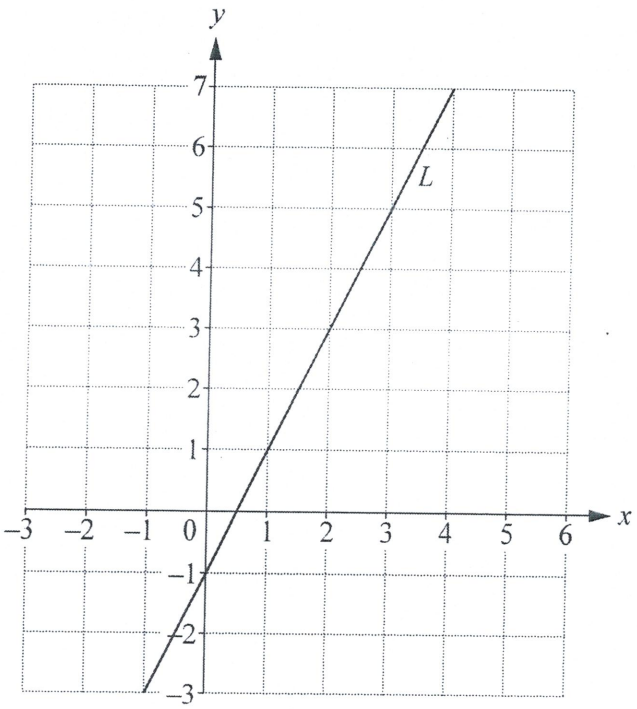
(....., ...) [1]

(b) Find the gradient of the line AB.

..... [2]

8

13-J-16



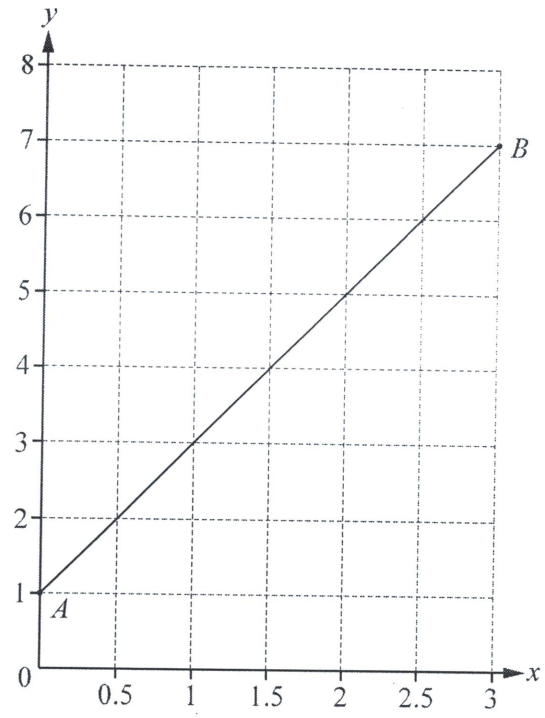
(a) Work out the gradient of the line L.

..... [2]

(b) Write down the equation of the line parallel to the line L that passes through the point (0, 6).

..... [2]

09 **(a)**



The line AB is drawn on the grid.

(i) Write down the co-ordinates of A.

(..... , ...) [1]

(ii) Work out the gradient of the line AB.

..... [2]

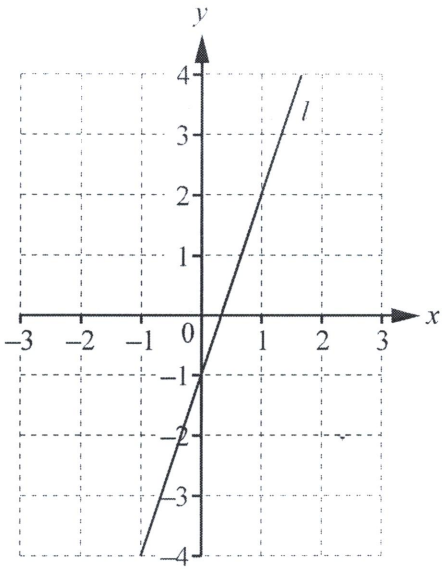
(iii) Write down the equation of the line AB in the form $y = mx + c$.

$y =$ ..... [2]

(b) Write down the equation of a straight line that is parallel to $y = 5x - 3$.

..... [1]

10

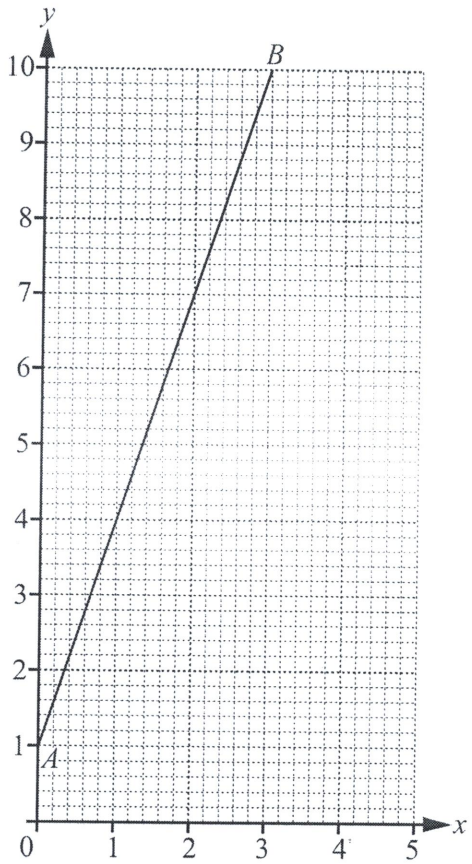


Write down the equation of line *l*.
Give your answer in the form $y = mx + c$.

$y =$ ..... [3]

11

J-12-17



Find the gradient of the line AB.

..... [2]

For Examiner's Use

12 **(b)** Another line, L, has the equation $y = \frac{2}{3}x - 5$.

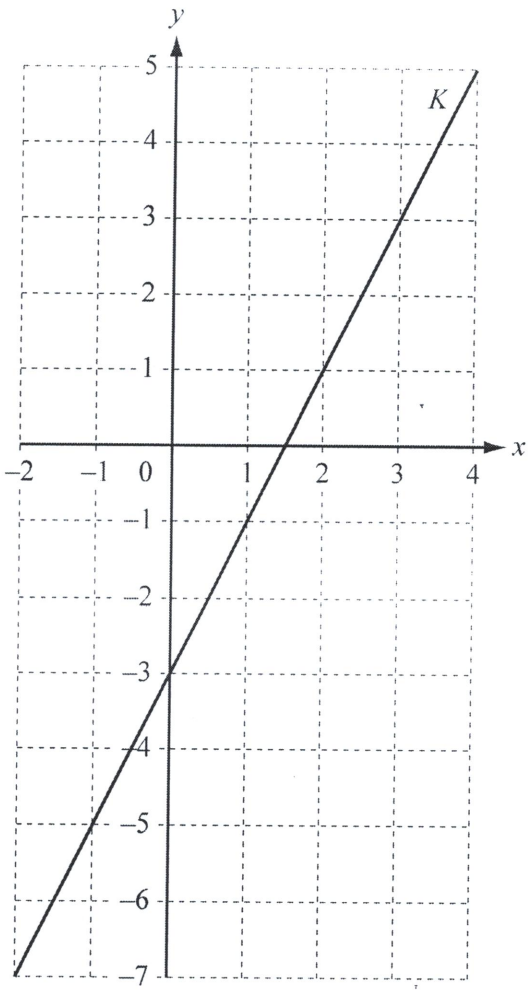
(i) Write down the gradient of L.

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

(ii) Write down the equation of a straight line that is parallel to L.

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

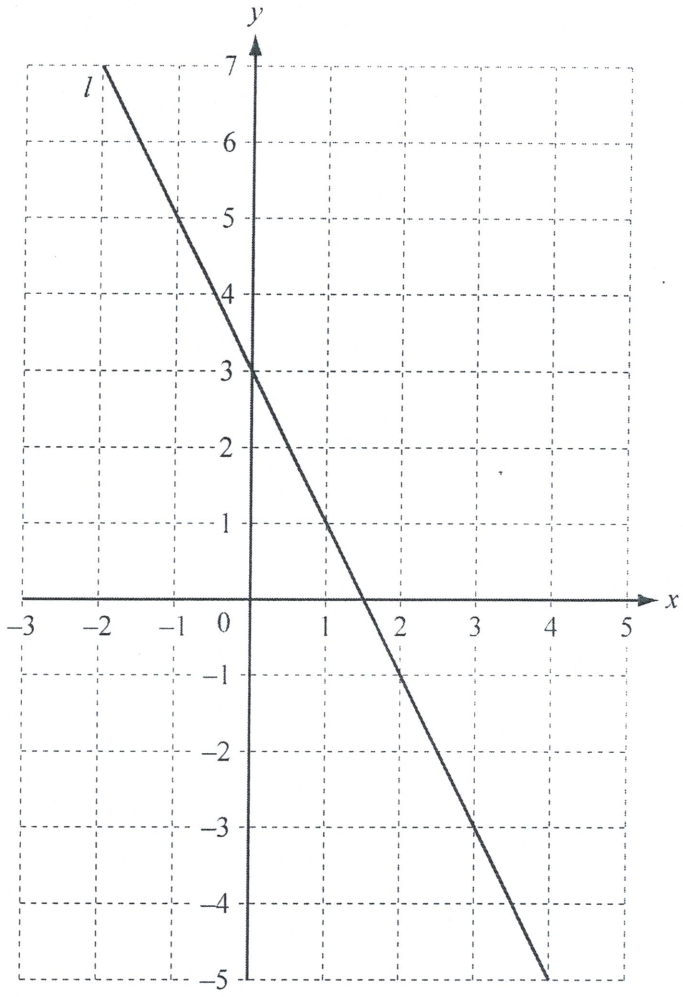
(c)



Write the equation of the line, K, in the form $y = mx + c$.

Answer(c) $y =$ ..... [3]

13 Write down the equation of the line, l, drawn on the grid below.
Give your answer in the form $y = mx + c$.

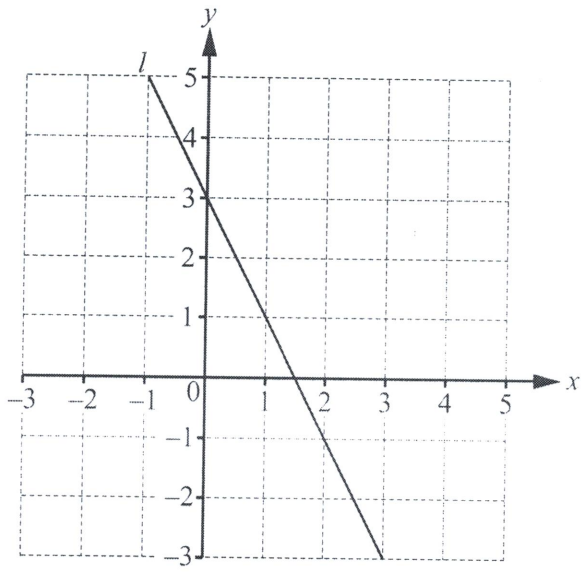


Answer(e) $y =$ ..... [3]

7 (e) 1

14

F-12-17



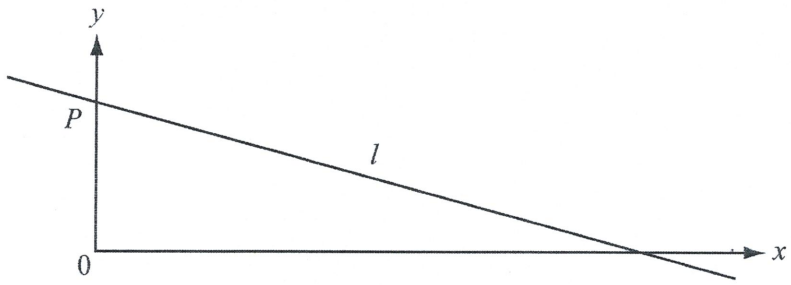
(a) Find the equation of the line l.
Give your answer in the form $y = mx + c$.

$y =$ ..... [3]

(b) Draw another straight line on the diagram that passes through $(-1, 1)$ and is parallel to the line l. [1]

12-J-14

15



NOT TO SCALE

The equation of the line l in the diagram is $y = 5 - x$.

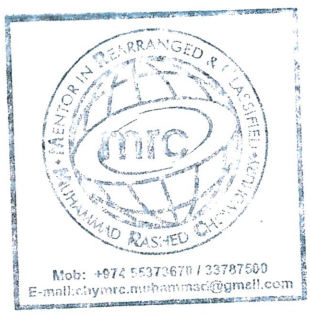
(a) The line cuts the y-axis at P.

Write down the co-ordinates of P.

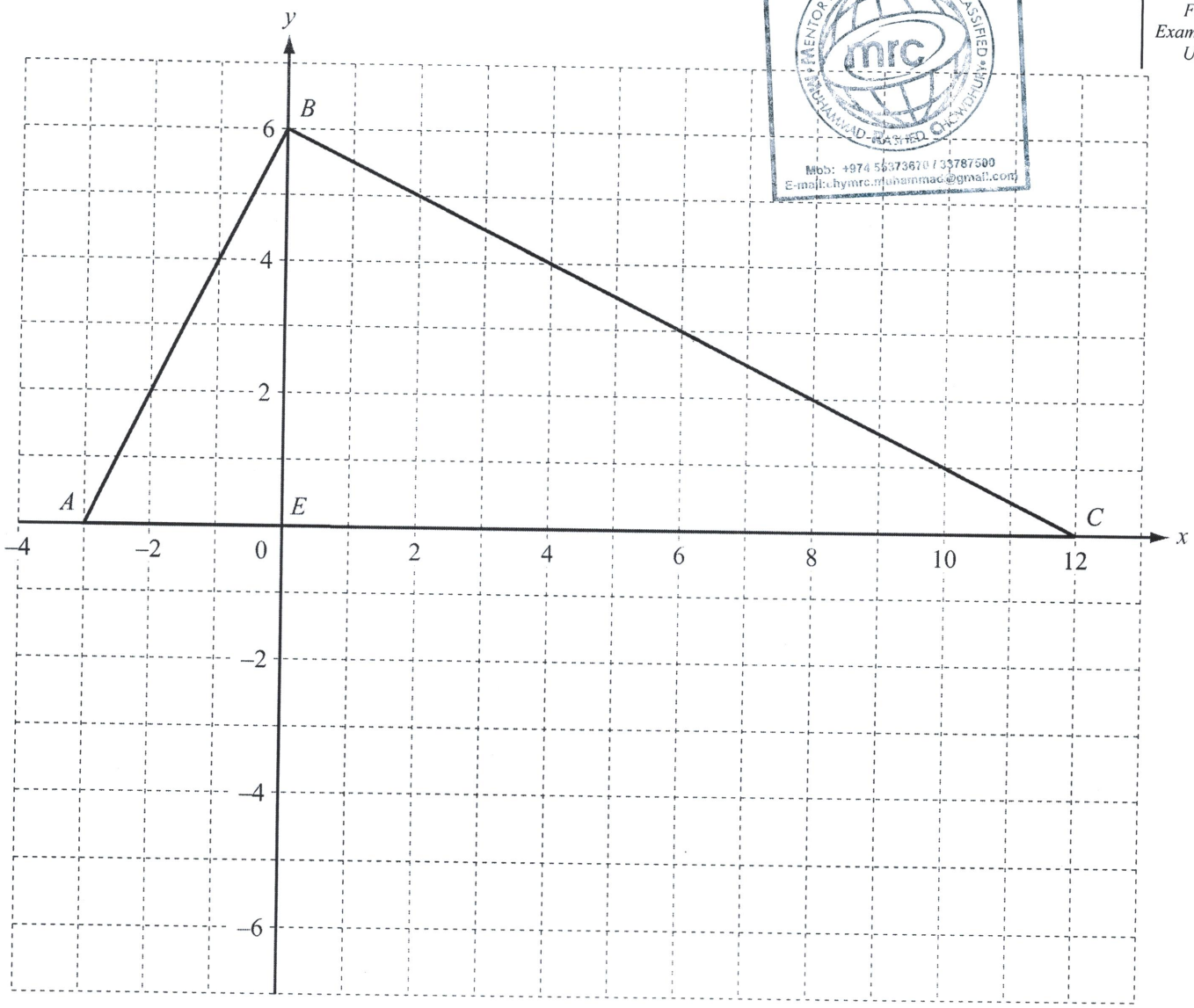
Answer(a) (....., ...) [1]

(b) Write down the gradient of the line l.

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



For Examiner's Use



Triangle ABC is drawn on a 1cm^2 grid.
E is the point (0, 0).

(a) Write down the gradient of the line AB.

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

(b) The gradient of BC is -0.5.

Write down the equation of the line BC in the form $y = mx + c$.

Answer(b) $y =$ ..... [2]

(c) Write down the ratio $AE : EC$.
Give your answer in its simplest form.

For Examiner's Use

Answer(c) ..... : ..... [2]

(d) Measure angle ABE.

Answer(d) Angle ABE = ... [1]

(e) Triangle ABE is **similar** to triangle BCE.

Explain what the word **similar** tells you about the triangles ABE and BCE.

Answer(e) .....

..... [2]

(f) Calculate the area of triangle ABC.

Answer(f) ..... cm^2 [3]

(g) $ABCD$ is a rectangle.

(i) Mark point D on the grid. [1]

(ii) Write down the co-ordinates of D.

Answer(g)(ii) (..... , ...) [1]