GCSE · Edexcel · Maths

1 hour 23 questions

Exam Questions

Linear Graphs

Equations of Straight Lines (y = mx + c) / Drawing Straight Line Graphs / Parallel Lines

Easy (6 questions)	/17
Medium (9 questions)	/19
Hard (8 questions)	/33
Total Marks	**/69**

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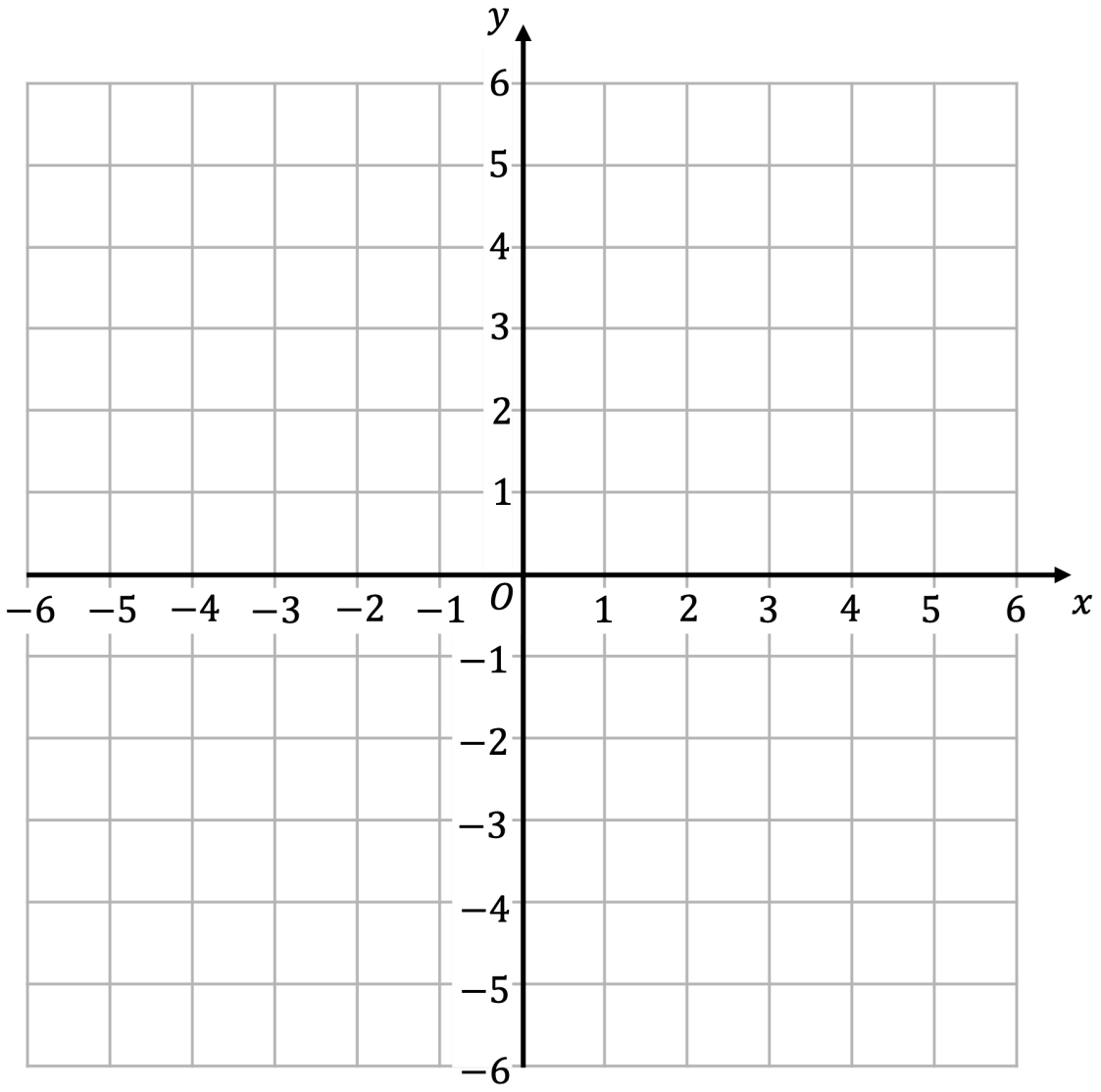
Easy Questions

1



On the grid,

i) draw the line $x = 5$

ii) draw the line $y = -3$

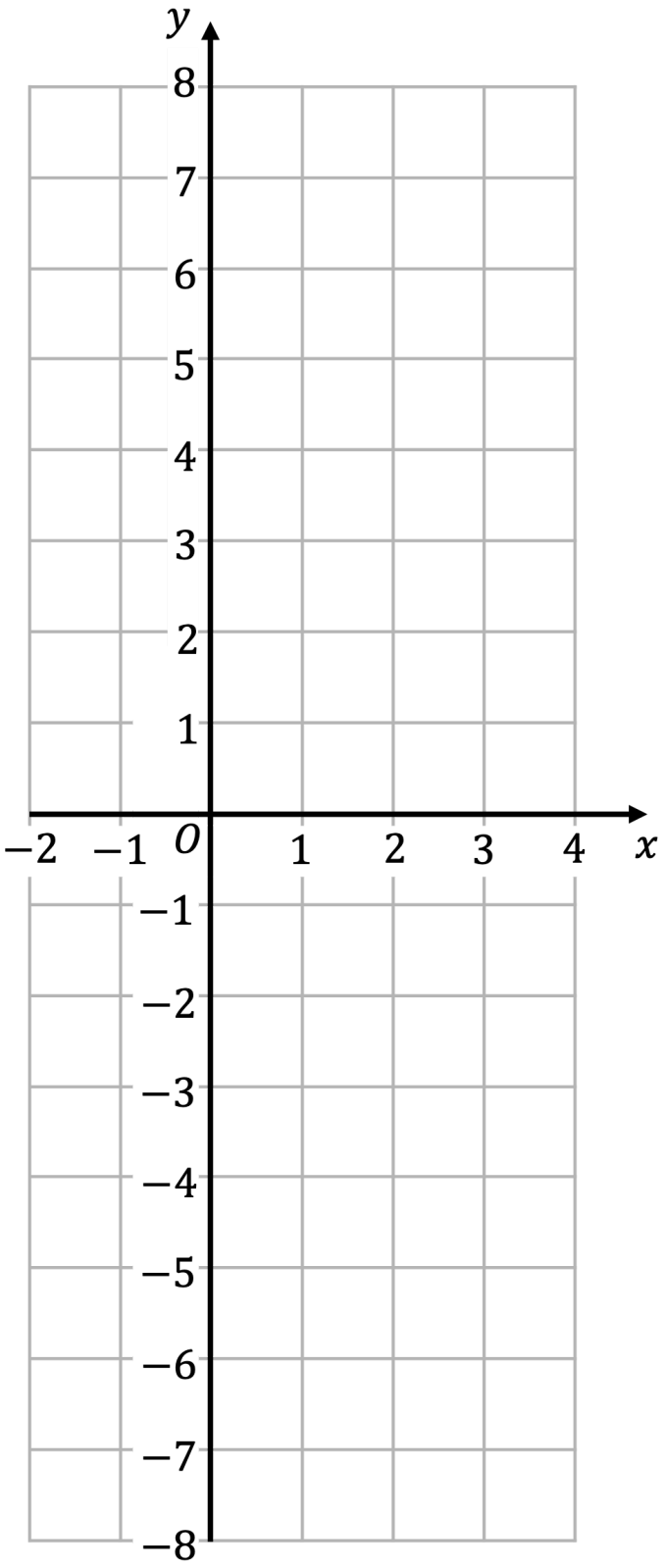
(2 marks)

2 (a) Complete the table of values for $y = 3x - 2$

x	-2	-1	0	1	2	3
y		-5				7

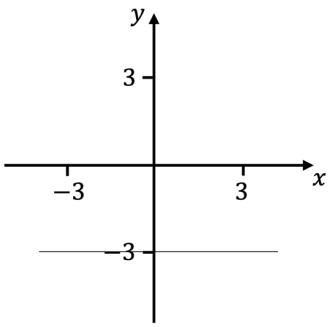
(2 marks)

(b) On the grid, draw the graph of $y = 3x - 2$ for values of x from -2 to 3.

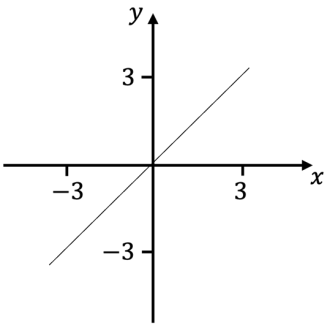


(2 marks)

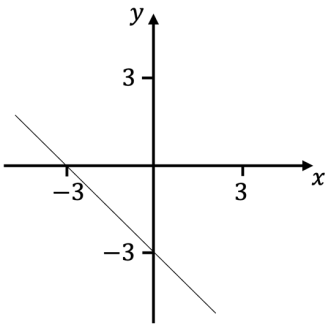
3 Here are six straight line graphs.



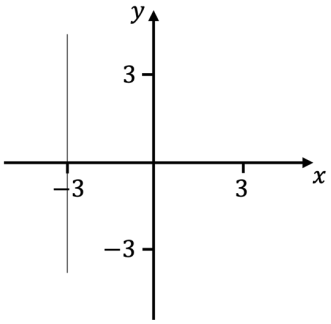
Graph A



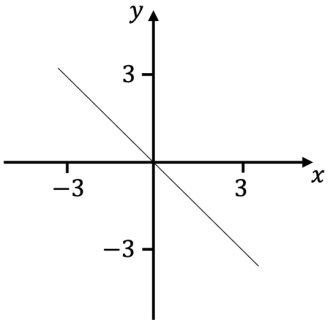
Graph B



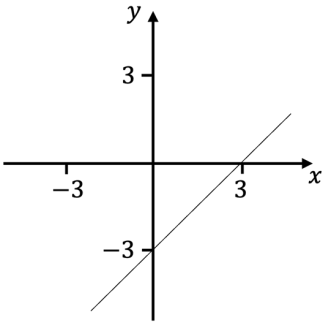
Graph C



Graph D



Graph E



Graph F

Match each equation in the table to the correct graph.
Write the letter of the graph in the table.

Equation	Graph
$y = -x$	
$y = -3$	
$y = x - 3$	

(2 marks)

4 (a) Write down the gradient of the line $y = 2x - 3$.

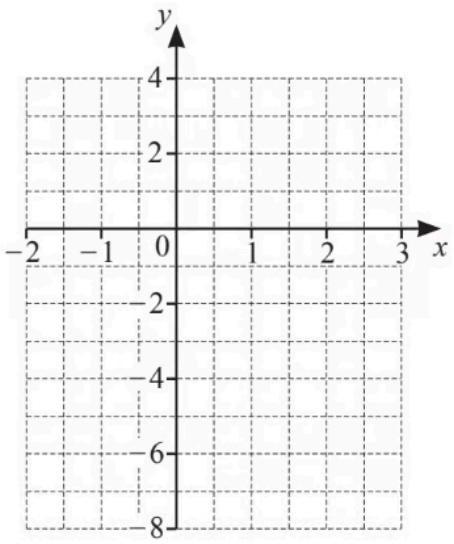
(1 mark)

(b) Complete the table of values for $y = 2x - 3$

x	-2	0	3
y			

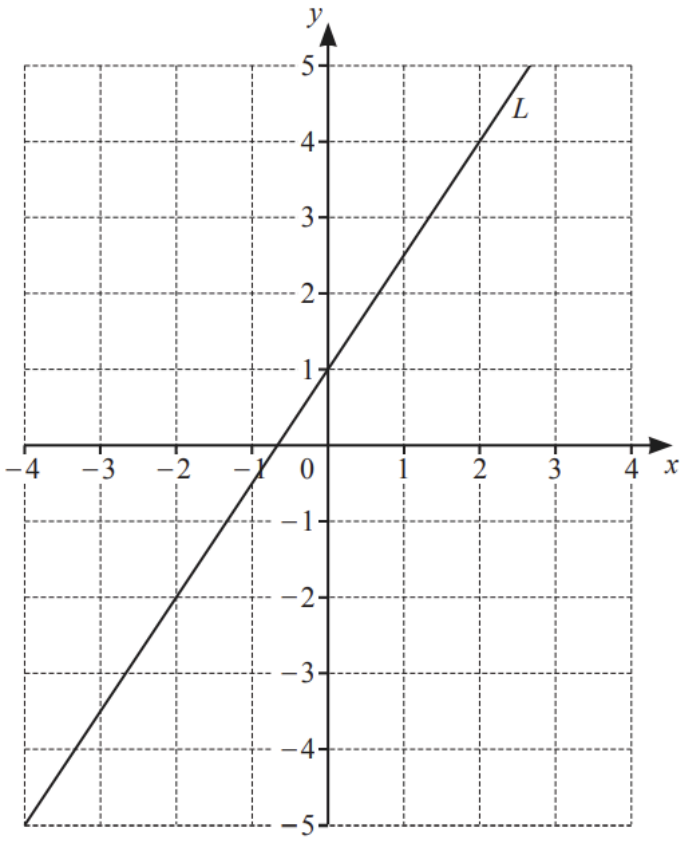
(2 marks)

(c) On the grid, draw the graph of $y = 2x - 3$ for $-2 \leqslant x \leqslant 3$.



(1 mark)

5 (a) The line L is shown on the grid.



Find the gradient of the line L.

(2 marks)

(b) Find the equation of the line L in the form $y = mx + c$.

(1 mark)

6 (a) For the line $y = 4x - 6$, write down the gradient.

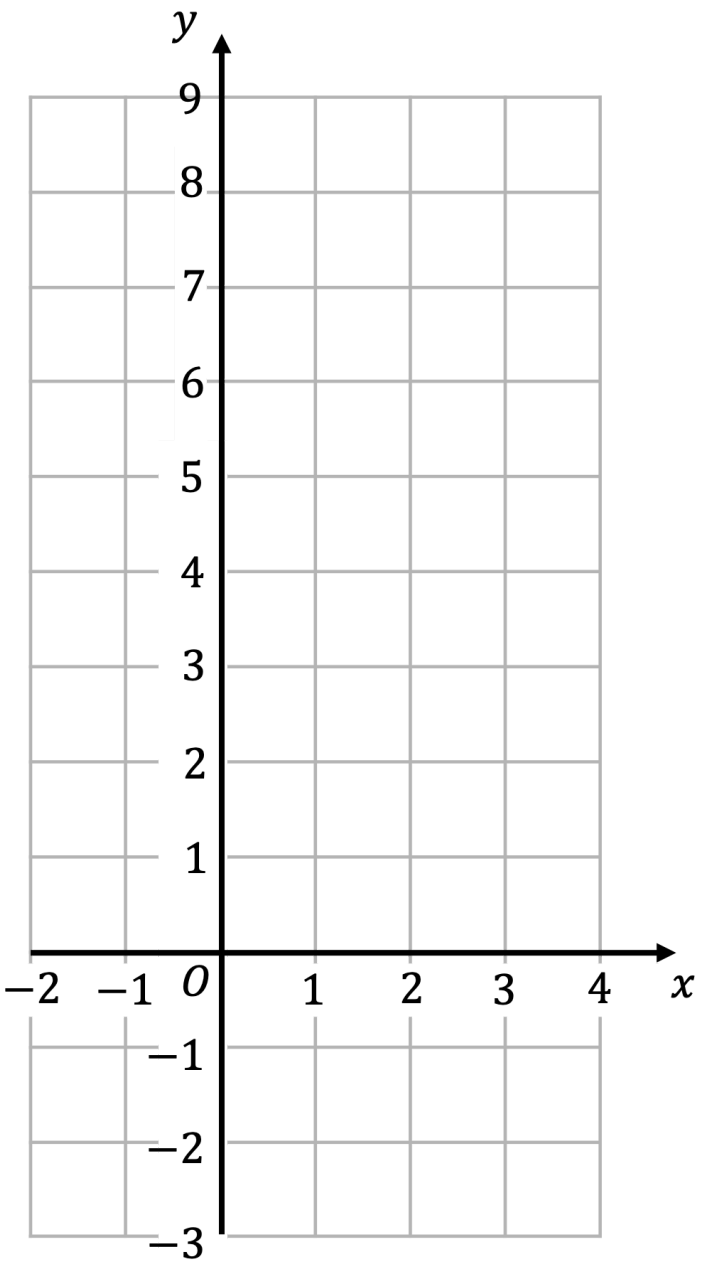
(1 mark)

(b) Write down the y-intercept.

(1 mark)

Medium Questions

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

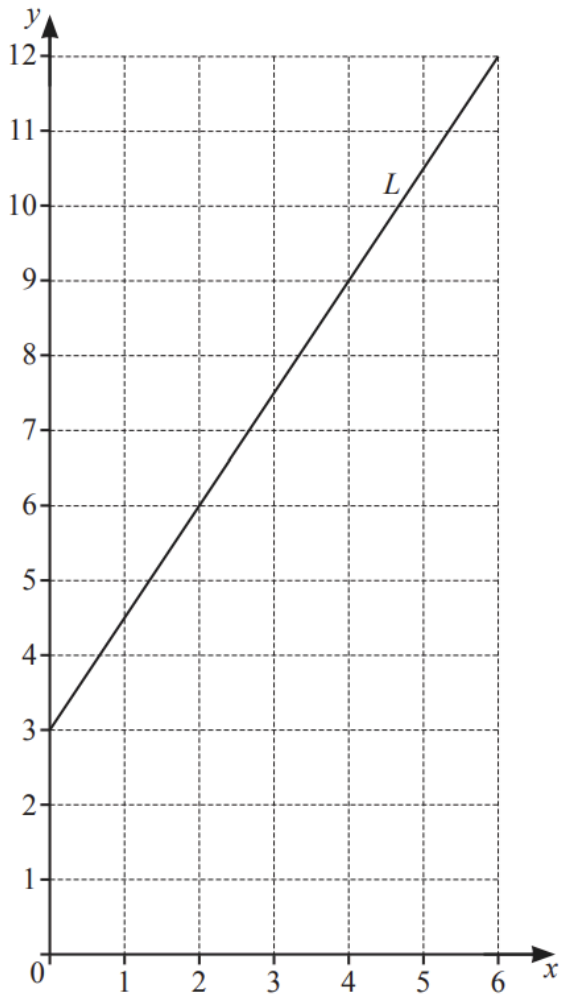


(3 marks)

2 Show that the point $(4, 11)$ lies on the line $y = 3x - 1$

(2 marks)

3

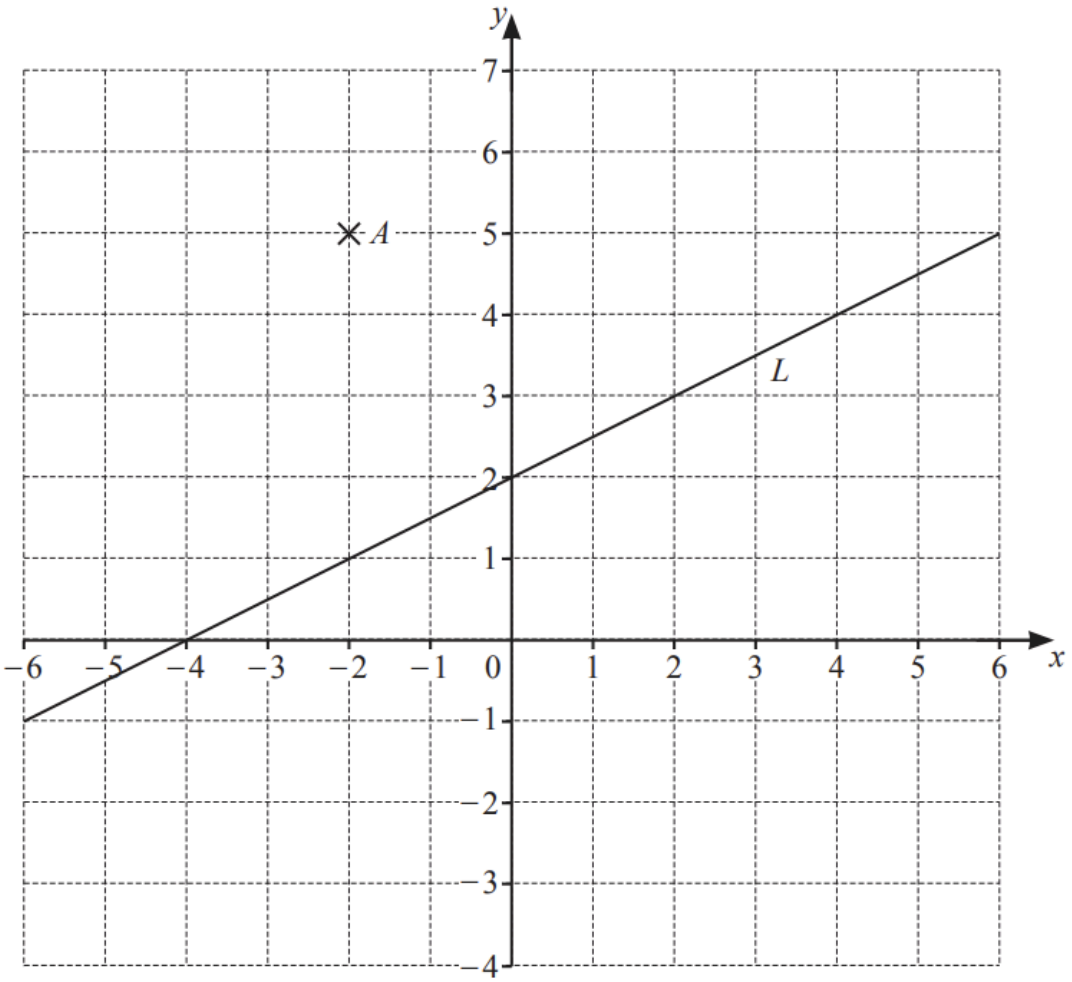


Find the equation of line L in the form $y = mx + c$.

$y =$ .....

(2 marks)

4



i) Write down the coordinates of point A.

[1]

ii) On the grid, plot the point (2, -3).

[1]

iii) The line L is shown on the grid.

Find the equation of the line L in the form $y = mx + c$.

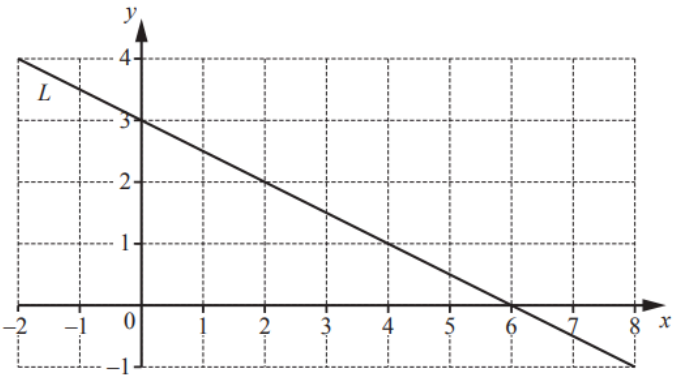
$y =$ .....[2]

(1 mark)

5 Find the co-ordinates of the point where the line $y = 3x - 8$ crosses the y-axis.

(1 mark)

6



Line L is drawn on the grid.

Find the equation of line L.
Give your answer in the form $y = mx + c$.

y = ...

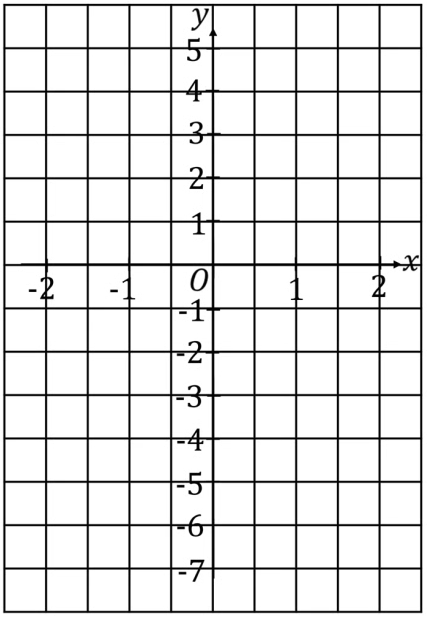
(3 marks)

7 A line, M, has the equation $y = 8x + 3$.

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

(2 marks)

8 On the grid, draw the graph of $y = 3x - 1$ for values of x from –2 to 2



(3 marks)

9 Write down the gradient of a line with equation $3x + 2y = 12$.

(2 marks)

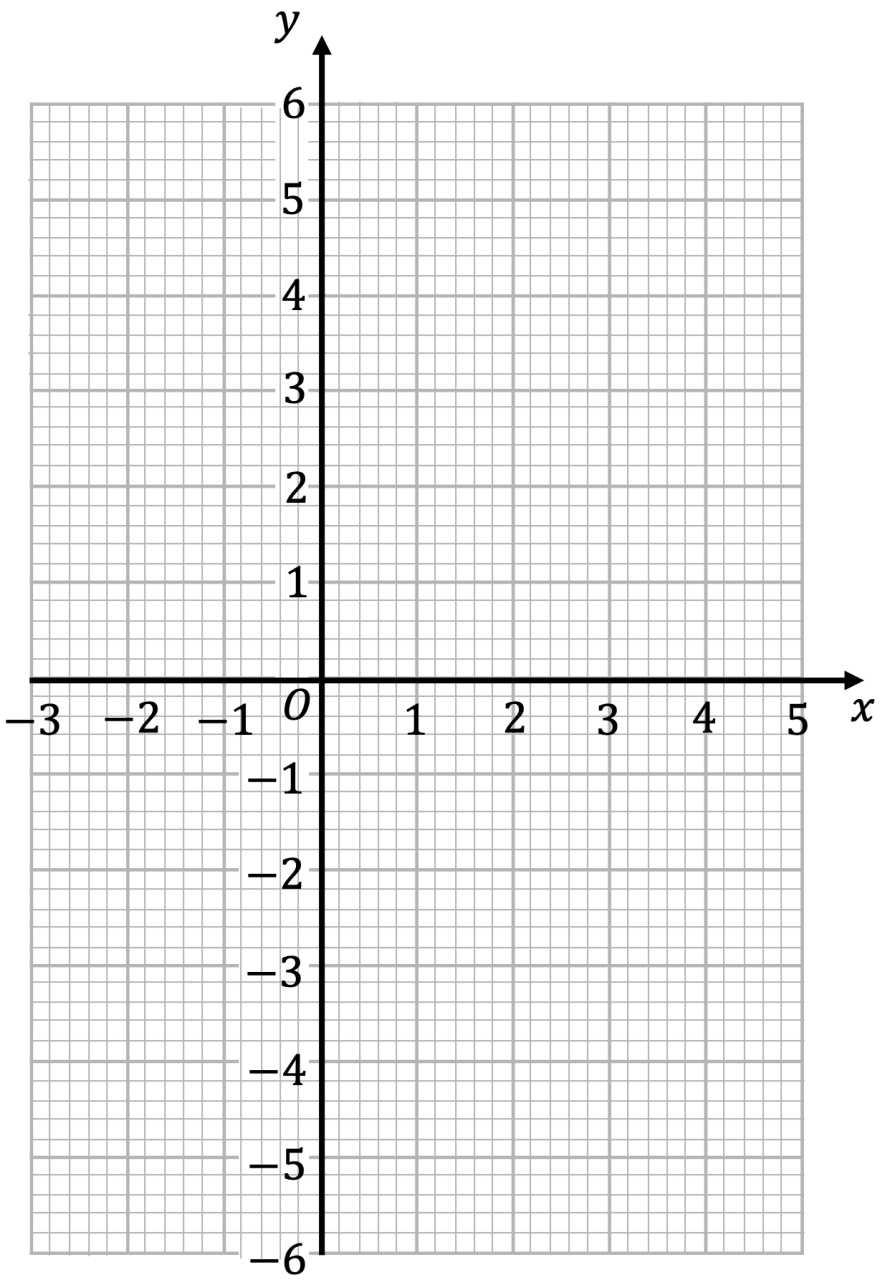
Hard Questions

1 (a) Complete the table of values for $y = 2 - \frac{3}{2}x$

x	-2	-1	0	1	2	3	4
y		3.5			-1		-4

(2 marks)

(b) On the grid, draw the graph of $y = 2 - \frac{3}{2}x$



(2 marks)

(c) Use your graph to find the value of x when $y = -3.4$

(1 mark)

2 Write down the equation of the line parallel to $y = 5x + 6$ that passes through (0, -7).

$y =$ .....

(1 mark)

3 (a) A straight line, l, has equation $y = 5x + 12$

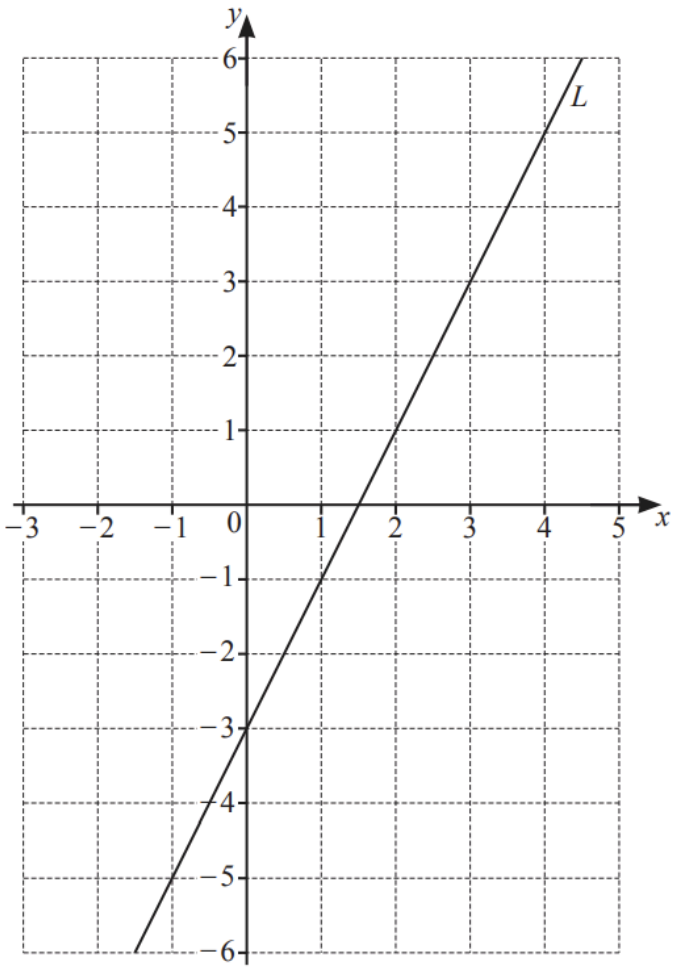
Write down the gradient of line l.

(1 mark)

(b) Find the coordinates of the point where line l crosses the x-axis.

(2 marks)

4

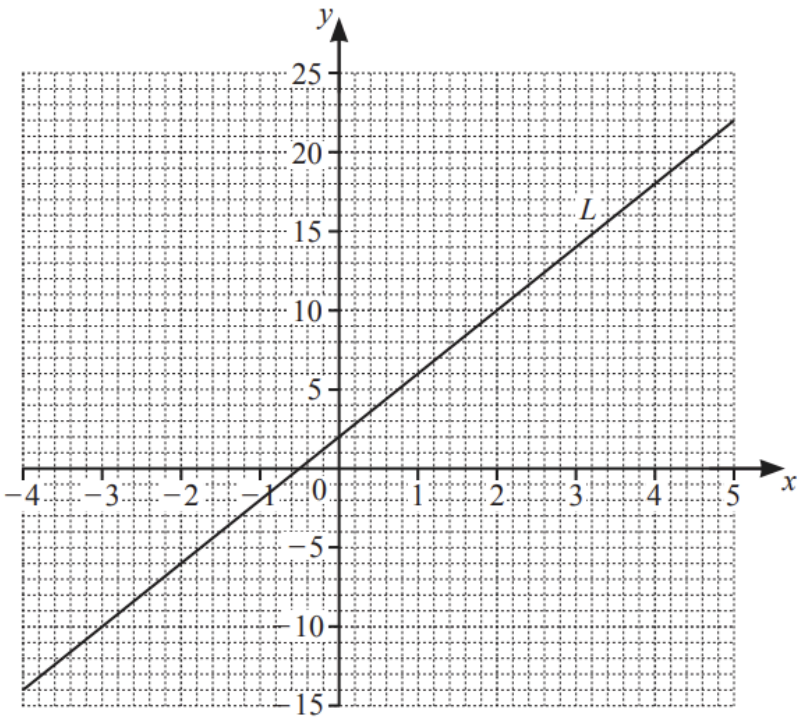


Find the equation of line L in the form $y = mx + c$

y = ...

(2 marks)

5 (a) The line L is shown on the grid.



Find the equation of the line L in the form $y = mx + c$.

y = ...

(3 marks)

(b) The equation of a different line is $y = 3x - 4$.

i) Write down the gradient of this line.

[1]

ii) Write down the co-ordinates of the point where this line crosses the y-axis.

[1]

(2 marks)

(c) On the grid, draw the graph of $y = -2x + 1$ for $-4 \leqslant x \leqslant 5$.

(3 marks)

6 i) Write down the co-ordinates of the point where the line $y = 6x - 3$ crosses the y-axis.

[1]

ii) Write down the equation of the straight line that

- passes through the origin

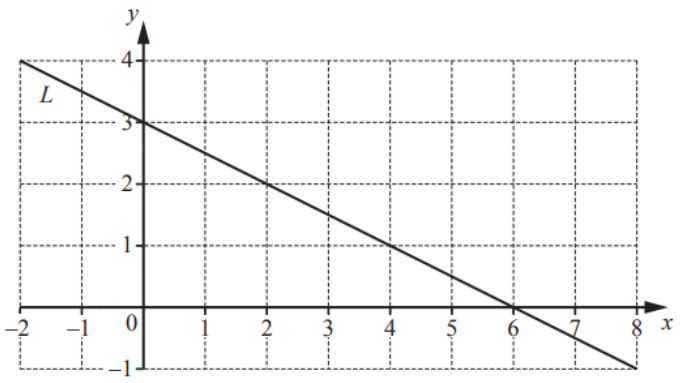
and

- is parallel to $y = 6x - 3$.

[1]

(2 marks)

7 (a)



Line L is drawn on the grid.

Find the equation of line L.
Give your answer in the form $y = mx + c$.

$y =$ .....

(3 marks)

(b) The points (9, a) and (b, 3) lie on the line $y = \frac{2}{3}x - 7$.

Work out the value of

i) a,

$a =$ ..... [2]

ii) b.

$b =$ ..... [2]

(4 marks)

8 A, B, C and D are four equations of straight line graphs.

A	$y = -3x + 4$

B	$y = 4x - 3$

C	$y = 3x - 4$

D	$y = -4x - 3$

i) Write down the letter of the graph that

a) passes through the point $(1, -1)$,

[1]

b) has a y- intercept of 4,

[1]

c) has a gradient of -4.

[1]

ii) The point $(p, -26)$ lies on the line $y = -3x + 4$.
Work out the value of p.

p = ... [2]

(5 marks)