

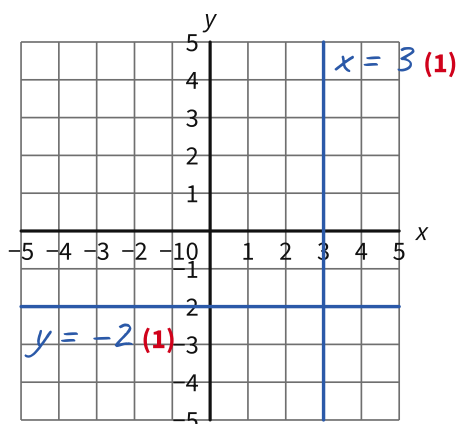
Straight Line Graphs

ANSWERS

Ruler | 30 minutes | Total marks: 24

Name _____ Class _____

1



On the grid, draw and label these two lines.

$$x = 3$$

$$y = -2$$

[2 marks]

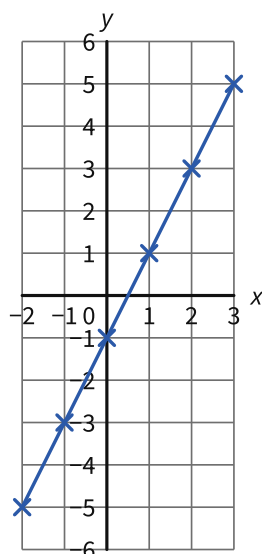
2

(a) Complete the table of values for $y = 2x - 1$

x	-2	-1	0	1	2	3
y	-5	-3	-1	1	3	5 (1)(1)

[2 marks]

(b) Use your table to draw the graph.



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

Points plotted (1) Straight line through them (1) [2 marks]

3

$$y = 3x + 2$$

(a) Write down the gradient of the line.

Answer 3 (1)

[1 mark]

(b) Write down the coordinates of the point where the line crosses the y-axis.

Answer (0, 2) (1)

[1 mark]

(c) Write down the equation of the line that is parallel to $y = 3x + 2$ and passes through (0, -4)

Answer $y = 3x - 4$ (1)

[1 mark]

4

Here are the equations of four lines.

$$y = 2x + 3 \quad y = 3x + 2 \quad y = 2x - 5 \quad y = -2x + 3$$

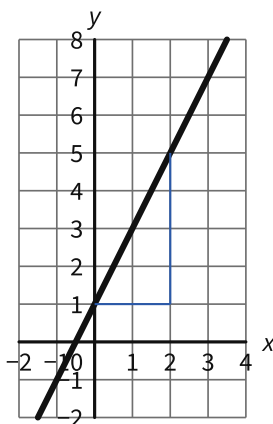
Write down the equations of the two lines that are parallel.

Answer $y = 2x + 3$ and $y = 2x - 5$ (1)

[1 mark]

5

The grid shows a straight line.



(a) Work out the gradient of the line.

4 up for 2 across (1)

Answer 2 (1)

[2 marks]

(b) Write down the equation of the line.

Answer $y = 2x + 1$ (1)

[1 mark]

6

A straight line has gradient 4 and passes through the point (2, 3)

Work out the equation of the line.

$$y = 4x + c \quad (1)$$

$$3 = 4 \times 2 + c, \text{ so } c = -5 \quad (1)$$

Answer $y = 4x - 5$ (1)

[3 marks]

7

A is the point $(1, 2)$ and B is the point $(4, 11)$

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

$$\frac{11 - 2}{4 - 1} = \frac{9}{3} \quad (1)$$

Answer 3 (1)

[2 marks]

(b) Work out the equation of the line AB .

$$2 = 3 \times 1 + c, \text{ so } c = -1 \quad (1)$$

Answer $y = 3x - 1$ (1)

[2 marks]

8

A is the point $(-3, 2)$ and B is the point $(5, 6)$

Work out the coordinates of the midpoint of AB .

$$\frac{-3 + 5}{2} \text{ and } \frac{2 + 6}{2} \quad (1)$$

Answer $(1, 4)$ (1)

[2 marks]

9

Three vertices of a rectangle are $(-2, -1)$, $(3, -1)$ and $(3, 2)$

Write down the coordinates of the fourth vertex.

Answer $(-2, 2)$ (1)

[1 mark]

10 Show that the point (4, 9) lies on the line $y = 2x + 1$

$$2 \times 4 + 1 = 9 \text{ (1)}$$

[1 mark]

Question	Topic	RAG
1	I can draw lines such as $x = 3$ and $y = -2$	
2	I can draw a straight line graph from a table	
3	I can read the gradient and intercept from $y = mx + c$	
4	I can recognise parallel lines	
5	I can find the equation of a line from its graph	
6	I can find the equation of a line from its gradient and a point	
7	I can find the equation of a line through two points	
8	I can find the midpoint of a line	
9	I can use coordinates in all four quadrants	
10	I can check whether a point lies on a line	