

Equation of a Straight Line

For AQA GCSE Mathematics (8300) • Higher tier

Name _____

Total marks: **23**

Answer **all** questions in the spaces provided. Show your working: marks are given for correct method.

- 1** Circle the gradient of the line $3y = 6x - 4$

[1 mark]

- 2** The line $y = 3x + c$ crosses the x -axis at $(4, 0)$
Circle the value of c .

[1 mark]

- 3** A straight line has gradient 3
The point $(4, 6)$ lies on the line.
Work out the coordinates of the points where the line crosses the x -axis and the y -axis.
[3 marks]

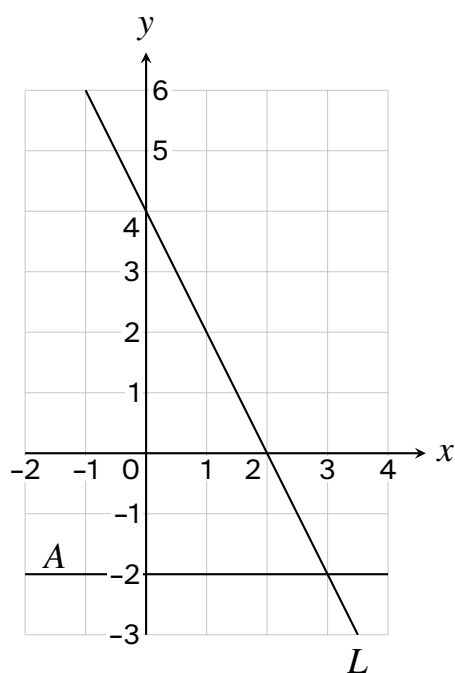
Answer x -axis _____ y -axis _____

- 4 Work out the equation of the line through $(-1, 1)$ and $(3, 9)$

[3 marks]

Answer _____

- 5 Lines A and L are drawn on the grid.



- (a) Write down the equation of line A .

[1 mark]

Answer _____

- (b) Work out the equation of line L .

[3 marks]

Answer _____

- 6** Line M passes through the points $(-4, 4)$ and $(6, -1)$
Work out the equation of line M .
Give your answer in the form $ax + by = c$ where a , b and c are integers.

[3 marks]

Answer _____

- 7** The points $A(2, 3)$, $B(5, 9)$ and $C(8, k)$ lie on a straight line.
Work out the value of k .

[2 marks]

Answer $k =$ _____

- 8** Line N is parallel to the line $3x + 4y = 20$
 N passes through the point $(-4, 7)$
Work out the equation of line N .
Give your answer in the form $y = mx + c$

[3 marks]

Answer _____

- 9 The line $5x + 2y = 20$ crosses the x -axis at A and the y -axis at B .
 O is the origin.
Work out the area of triangle OAB .

[3 marks]

Answer _____ units²