

Straight Line Graphs

GCSE Mathematics • **Foundation Tier** • Grades 4–5 • Non-calculator

Name:

Class:

Total: / 48

Show all your working. Marks are given for correct method as well as the final answer.

1. Write down the gradient of $y = 4x + 3$. [1 mark]

Answer:

2. Write down the y -intercept of $y = 2x - 7$. [1 mark]

Answer:

3. Write down the gradient and intercept of $y = -3x + 5$. [2 marks]

Answer:

4. Rearrange $2y = 6x + 10$ into the form $y = mx + c$ and write down the gradient. [2 marks]

Answer:

Answer:

5. Rearrange $3x + y = 12$ into the form $y = mx + c$. [2 marks]

Answer:

Answer:

6. Rearrange $4x - 2y = 8$ into the form $y = mx + c$. [3 marks]

Answer:

Answer:

7. Work out the gradient of the line through $(1, 3)$ and $(5, 11)$. [3 marks]

Answer:

8. Work out the gradient of the line through $(2, 7)$ and $(6, 1)$. [3 marks]

Answer:

9. A line has gradient 3 and passes through $(0, -2)$. Write its equation. [2 marks]

Answer:

10. A line has gradient 2 and passes through $(3, 10)$. Work out its equation. [3 marks]

Answer:

11. Work out the equation of the line through $(1, 5)$ and $(4, 14)$. [4 marks]

Answer:

12. Write down the gradient of any line parallel to $y = 5x - 1$. [1 mark]

Answer:

13. A line is parallel to $y = 4x + 1$ and passes through $(2, 3)$. Work out its equation. [3 marks]

Answer:

14. Write down the gradient of a line perpendicular to $y = 2x + 7$. [2 marks]

Answer:

15. A line is perpendicular to $y = -\frac{1}{3}x + 2$. Write down its gradient. [2 marks]

Answer:

16. Does the point $(3, 11)$ lie on the line $y = 3x + 2$? Show your working. [2 marks]

Answer:

17. Does the point $(2, 9)$ lie on the line $y = 4x - 1$? [2 marks]

Answer:

18. Work out the midpoint of $(1, 4)$ and $(7, 10)$. [2 marks]

Answer:

19. The line L passes through $(0, 6)$ and $(4, 0)$.

(a) Work out the gradient of L . [2 marks]

(b) Write the equation of L in the form $y = mx + c$. [2 marks]

Answer:

20. Line A is $y = 2x + 1$. Line B passes through $(0, 4)$ and is perpendicular to A .

(a) Write down the gradient of B . [2 marks]

(b) Write the equation of B . [2 marks]

Answer: