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Private tuition and small online Study Pods

Equation of a Line

Grade 5 topic · Foundation and Higher · Edexcel and AQA

How to use this pack
20 questions that get harder as you go. Foundation students: aim for Questions 1–15 (50 marks) and have a go at the rest. Higher students: complete all 20. Show your working on the lines and write your final answer on the answer line, then mark yourself with the answers at the back. Diagrams are not drawn accurately. Total: 71 marks.

Warm-up

1 Write down the equation of the line with gradient 4 and y-intercept 4. **[2 marks]**

Answer _____

2 A line crosses the y-axis at (0, 4) and has gradient −1. Find its equation. **[2 marks]**

Answer _____

3 Write down the equation of the line through (0, 4) with gradient 3. **[2 marks]**

Answer _____

4 What is the equation of the line with gradient 2 passing through the origin? **[2 marks]**

Answer _____

5 Write down the equation of the horizontal line through (3, 1). **[2 marks]**

Answer _____

Core

6 Find the equation of the line with gradient −1 that passes through (1, 2). **[4 marks]**

Answer _____

7 Find the equation of the line with gradient -2 that passes through $(4, -2)$. **[4 marks]**

Answer _____

8 Find the equation of the line with gradient 4 that passes through $(-1, 4)$. **[4 marks]**

Answer _____

9 Find the equation of the line with gradient 2 that passes through $(-2, 3)$. **[4 marks]**

Answer _____

10 Find the equation of the line with gradient 4 that passes through (3, 5). **[4 marks]**

Answer _____

Stretch

11 Find the equation of the line through (2, −1) and (5, −4). **[4 marks]**

Answer _____

12 Find the equation of the straight line passing through (2, 3) and (3, 2). **[4 marks]**

Answer _____

13 Find the equation of the line through (4, 1) and (5, 2). **[4 marks]**

Answer _____

14 Find the equation of the straight line passing through (−1, 3) and (0, 7). **[4 marks]**

Answer _____

15 Find the equation of the line through (0, −3) and (2, 5). **[4 marks]**

Answer _____

Challenge

16 Find the equation of the line parallel to $y = -x + 6$ that passes through $(-2, 2)$. **[5 marks]**

Answer _____

17 Find the equation of the line perpendicular to $y = 4x + 3$ that passes through $(-1, 3)$. **[5 marks]**

Answer _____

18 The line $2y + 6x = 2$ crosses the y-axis at A. Find the coordinates of A. **[4 marks]**

Answer _____

19 A line passes through (0, 4) and (2, 0). Find its equation. **[4 marks]**

Answer _____

20 Find the equation of the line that passes through (2, 3) and is parallel to the x-axis. **[3 marks]**

Answer _____