JRA Tutors
Private tuition and small online Study Pods

Drawing Linear Graphs

Grade 3 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 (33 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: 53 marks.

Warm-up

1 Work out the value of y when x = −1 on the line y = x + 5. **[1 mark]**

Answer _____

2 Work out the value of y when x = 0 on the line y = x + 2. **[1 mark]**

Answer _____

3 Work out the value of y when x = 0 on the line y = −x + 2. **[1 mark]**

Answer _____

4 Work out the value of y when x = −1 on the line y = −2x + 2. **[1 mark]**

Answer _____

5 Work out the value of y when x = 2 on the line y = 2x + 3. **[1 mark]**

Answer _____

Core

6 Complete the table of values for y = x + 2, for x = −2, −1, 0, 1, 2. **[3 marks]**

Answer _____

7 Complete the table of values for y = 3x + 5, for x = −2, −1, 0, 1, 2. **[3 marks]**

Answer _____

8 Complete the table of values for y = 3x + 1, for x = −2, −1, 0, 1, 2. **[3 marks]**

Answer _____

9 Complete the table of values for $y = -2x$, for $x = -2, -1, 0, 1, 2$. **[3 marks]**

Answer _____

10 Complete the table of values for $y = x + 1$, for $x = -2, -1, 0, 1, 2$. **[3 marks]**

Answer _____

Stretch

11 Write down the gradient of the line $y = x + 5$. **[2 marks]**

Answer _____

12 Write down where the line $y = -x + 3$ crosses the y-axis. **[2 marks]**

Answer _____

13 Does the point (3, 9) lie on the line $y = x + 5$? Show your working. **[3 marks]**

Answer _____

14 Work out where the line $y = 3x - 2$ crosses the x-axis. **[3 marks]**

Answer _____

15 Write down the equation of the line parallel to $y = 2x + 5$ that passes through (0, 8). **[3 marks]**

Answer _____

Challenge

16 A line passes through (0, -3) and has gradient 3. Write down its equation and its value of y at x = 4. **[4 marks]**

Answer _____

17 The line y = 3x − 2 and the line y = 2 cross. Find the x-coordinate of the crossing point. **[4 marks]**

Answer _____

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

Answer _____

19 Work out the gradient of the line joining (-3, -6) and (-2, -5). **[4 marks]**

Answer _____

20 The line $y = -x+3$ passes through (k, 0). Find k. **[4 marks]**

Answer _____