

GCSE Maths Straight-Line Graphs and Coordinates (Foundation): check-up and exam-style questions: answers

GCSE Maths - Straight-Line Graphs and Coordinates - Foundation - Test yourself

Answers. Final answers to the worksheet questions. Full step-by-step solutions for every question are free at websink.site/gcse/maths/ch12-straight-line-graphs-coordinates/foundation/check-up-and-exam-style-questions/

Exercise 12Z Check-up (non-calculator) Non-calculator

- 1 Which quadrant is the point $(-3, 5)$ in?

Answer: Quadrant 2

- 2 Find the midpoint of $A(-2, 3)$ and $B(6, 9)$.

Answer: $(2, 6)$

- 3 Work out the gradient of the line through $(1, 2)$ and $(4, 11)$.

Answer: 3

- 4 Complete a table of values for $y = 2x - 3$ for $x = -1, 0$ and 2 .

Answer: $-5, -3, 1$

- 5 Write down the gradient and y -intercept of the line $y = 5 - 2x$.

Answer: gradient -2 , y -intercept 5

- 6 Find the equation of the line with gradient -2 that passes through $(1, 4)$.

Answer: $y = -2x + 6$

- 7 Find the equation of the line parallel to $y = 3x + 1$ that passes through $(0, -2)$.

Answer: $y = 3x - 2$

- 8 Is the point $(2, 7)$ on the line $y = 3x + 1$?

Answer: Yes

- 9 Work out the length of the line from $(0, 0)$ to $(5, 12)$.

Answer: 13

- 10 Find the equation of the line through $(0, 1)$ and $(2, 5)$.

Answer: $y = 2x + 1$

Exercise 12X Exam-style questions Non-calculator

- 1 ABCD is a parallelogram. A is $(-2, 1)$, B is $(1, -2)$ and C is $(5, -2)$. Write down the coordinates of D. [2 marks]

Answer: $(2, 1)$

- 2 A is the point $(-3, 4)$ and B is the point $(5, -2)$. Find the coordinates of the midpoint of AB. [2 marks]

Answer: (1, 1)

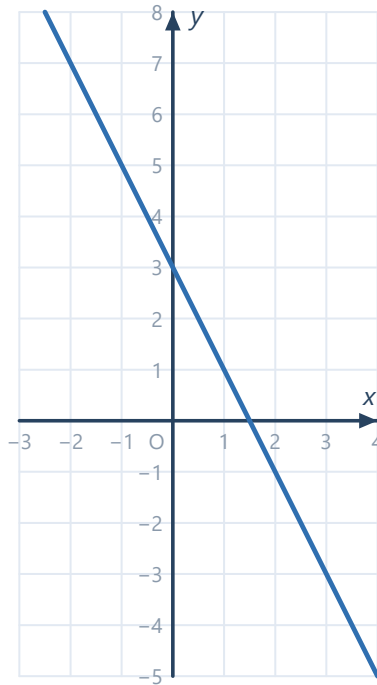
- 3** A is the point $(-2, 1)$ and B is the point $(4, 5)$. Work out the length of AB. Give your answer correct to 1 decimal place. [3 marks]

Answer: 7.2

- 4** (a) Complete a table of values for $y = 2x - 3$ for values of x from -1 to 4 . (b) Draw the graph of $y = 2x - 3$.

Answer: Points $(-1, -5)$, $(0, -3)$, $(1, -1)$, $(2, 1)$, $(3, 3)$, $(4, 5)$ joined by a straight line [3 marks]

- 5** Find the equation of the straight line shown on the grid. [3 marks]



Answer: $y = -2x + 3$

- 6** A straight line passes through the points $(1, 5)$ and $(4, 11)$. Find the equation of the line. [3 marks]

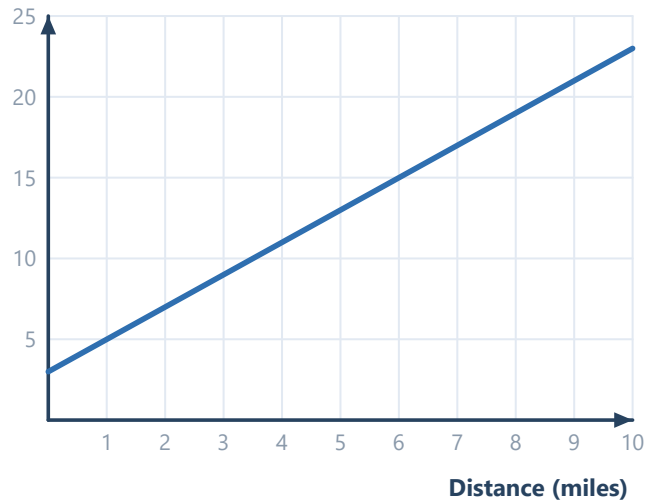
Answer: $y = 2x + 3$

- 7** The line L has equation $y = 3x - 2$. Find the equation of the line that is parallel to L and passes through the point $(1, 7)$. [3 marks]

Answer: $y = 3x + 4$

- 8** The graph shows the cost, £C, of a taxi journey of n miles. (a) Work out the cost of a journey of 4 miles. (b) Rob pays £15. How many miles was his journey? (c) Work out the cost per mile. [4 marks]

Cost (£)



- (a) the cost of 4 miles

Answer: £11

- (b) the distance for £15

Answer: 6 miles

- (c) the cost per mile

Answer: £2 per mile

- 9 Show that the line $y = 2x + 1$ is parallel to the line $2y - 4x = 7$.

[2 marks]

Answer: Both have gradient 2

- 10 On the same grid, draw the graphs of $y = x + 1$ and $y = 5 - x$ for x from 0 to 5. Write down the coordinates of the point where the two lines cross.

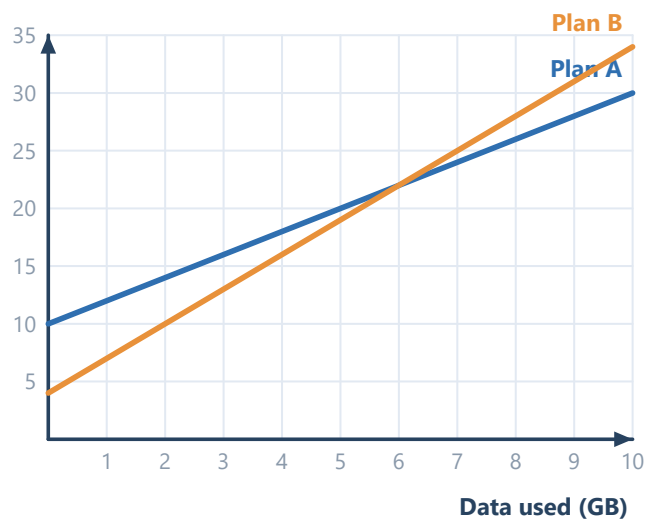
[4 marks]

Answer: (2, 3)

- 11 The cost of Plan A is £10 plus £2 per GB, and the cost of Plan B is £4 plus £3 per GB. Use the graph to find the amount of data for which the plans cost the same, and say which plan is cheaper for 8 GB.

[3 marks]

Monthly cost (£)



Answer: 6 GB; Plan A is cheaper for 8 GB

