

KS3 – Graphs – Answers

Section A – Coordinates

Q1

- a) (x, y)
- b) The horizontal/x-coordinate.
- c) The vertical/y-coordinate.
- d) $(0, 0)$

Q2

- A = $(-6, 5)$
- B = $(3, 7)$
- C = $(-4, -3)$
- D = $(5, -6)$
- E = $(0, 4)$
- F = $(7, 0)$

Q3

- a) A $(-7, 2)$
- b) B $(4, 6)$
- c) C $(-5, -5)$
- d) D $(6, -3)$
- e) E $(0, -6)$
- f) F $(3, 0)$

Q4

- a) Quadrant I
- b) Quadrant II
- c) Quadrant III
- d) Quadrant IV

Section B – Plotting Linear Graphs

Q5

- a) $y = mx + c$
- b) The gradient.
- c) The y-intercept.
- d) Its coordinates satisfy the equation of the line.

Q6

- a) $(-3, -5)$
- b) $(-1, -1)$
- c) $(0, 1)$
- d) $(2, 5)$
- e) $(3, 7)$

Q7

- a) $(-4, 6)$
- b) $(-2, 4)$
- c) $(0, 2)$
- d) $(3, -1)$
- e) $(6, -4)$

Q8

$(-2, -7), (-1, -5), (0, -3), (1, -1), (2, 1), (3, 3)$

Q9

$(-2, 8), (-1, 6), (0, 4), (1, 2), (2, 0), (3, -2)$

Section C – Gradient

Q10

- a) How steep the line is and whether it rises or falls.
- b) Gradient = change in $y \div$ change in x .
- c) Negative.

Q11

- a) 2
- b) 2
- c) 2
- d) 2

Q12

- a) -2
- b) -2
- c) -1
- d) $-1/2$

Q13

- a) 2
- b) $-3/2$
- c) $-1/2$
- d) 1

Q14

- a) -1
- b) Decreasing.
- c) A negative gradient means the line falls as x increases.

Section D – $y = mx + c$

Q15

a) $m = 1$, $c = -1$, so $y = x - 1$

b) $m = -2$, $c = 1$, so $y = -2x + 1$

Q16

a) $y = 2x + 3$

b) $y = 2x - 2$

c) $y = -2x + 5$

d) $y = -3x - 4$

Q17

a) $y = 2x + 1$

b) $y = 2x - 3$

c) $y = -2x + 1$

d) $y = 2x + 5$

Q18

a) $y = 3x/2 + 1$

b) $y = -x/2 + 3/2$

c) $y = 2x - 11$

d) $y = -3x/2 - 8$

Q19

a) $m = 2$, $c = -3$, so $y = 2x - 3$

b) $m = -2$, $c = -7$, so $y = -2x - 7$