AQA Level 2 Further mathematics Coordinate geometry

Section 1: Points and straight lines

Section test

1. Here are four straight-line equations.

1	$3y = 4x + 5$	2	$4y = 3x - 1$
3	$4y + 3x = 7$	4	$4x + 3y = 2$

Which one of the following statements is true?

(a) Lines 1 and 2 are perpendicular
(b) Lines 1 and 4 are parallel
(c) Lines 2 and 4 are perpendicular
(d) Lines 2 and 3 are parallel
I don't know

Questions 2 – 4 are about the points P (4, -2) and Q (-3, -5).

2. What is the length PQ?

(a) $\sqrt{50}$
(b) $\sqrt{98}$
(c) $\sqrt{40}$
(d) $\sqrt{58}$
(e) I don't know

3. What is the midpoint of PQ?

(a) (3.5, -3.5)
(b) (0.5, -3.5)
(c) (3.5, 1.5)
(d) (-3.5, 1.5)
(e) I don't know

4. The point S lies on PQ and is such that PS:SQ = 3:2. What are the coordinates of S?

(a) (-0.2, -3.8)
(b) (7, 0)
(c) (1.2, -3.2)
(d) (1, 1)
(e) I don't know

5. P is the point (3, 5). Q is the point (-1, 9). R is the midpoint of PQ.
On which one of the following lines does R lie?

(a) $y = x + 6$
(b) $y = x + 8$
(c) $y = x - 6$
(d) $y = x - 8$
(e) I don't know

AQA FM Coordinate geometry 1 section test

6. A is the point (1, 4). B is the point (7, -6). The point C divides AB in the ratio 3:5. What are the coordinates of C?

(a) (4.6, -2)
(b) (2.25, -3.75)
(c) (3.6, -6)
(d) (3.25, 0.25)
(e) I don't know

7. What is the equation of the straight line that is parallel to the line $2y + 3x = 7$ and passes through the point (2, -1)?

(a) $2y + 3x = 1$
(b) $3y - 2x = 8$
(c) $2y + 3x = 4$
(d) $3y - 2x = -1$
(e) I don't know

8. What is the equation of the straight line that is perpendicular to the line $3y = x - 1$ and passes through the point (1, 3)?

(a) $y = -3x + 6$
(b) $3y = x + 8$
(c) $y = 3x$
(d) $3y = -x + 10$
(e) I don't know

9. Point A is (5, -2) and point B is (3, 6).
The equation of the perpendicular bisector of AB is

(a) $4y = -x + 12$
(b) $4y = x + 14$
(c) $4y = x + 4$
(d) $4y = -x + 16$
(e) I don't know

10. A is the point (1, 5), B is the point (4, 7) and C is the point (5, 2).
Triangle ABC is

(a) right-angled
(b) scalene with no right angle
(c) equilateral
(d) isosceles
(e) I don't know