

OCR Core 1

Coordinate geometry

Section 1: Coordinates, points and lines

Multiple Choice Test

Do not use a calculator in this test.

1. Which of the following points does **not** lie on the line $2y + 5x - 4 = 0$?

- (a) (2, 3) (b) (1, -0.5)
(c) (0, 2) (d) (0.8, 0)
(e) I don't know

2. Here are four straight-line equations.

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

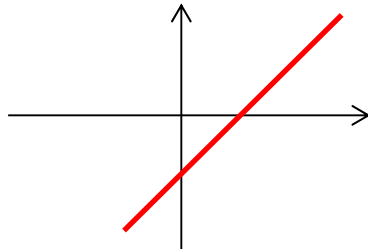
Which one of the following statements is true?

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

3. A straight line has equation $10y = 3x + 15$. Which of the following is true?

- (a) The gradient is 3 and the y-intercept is 15
(b) The gradient is 0.3 and the y-intercept is 1.5
(c) The gradient is 15 and the y-intercept is 3
(d) The gradient is 1.5 and the y-intercept is 0.3
(e) I don't know

4.



The diagram shows a sketch of one of the following lines. Which one?

- (a) $y + x = 1$ (b) $y - x + 1 = 0$
(c) $y = x + 1$ (d) $y + x + 1 = 0$
(e) I don't know

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5. P is the point (2, 7). Q is the point (6, -3).
What is the gradient of PQ?
- (a) 0.4
(b) -0.4
(c) 2.5
(d) -2.5
(e) I don't know
6. P is the point (4, -2). Q is the point (-3, -5). What is the length PQ?
- (a) $\sqrt{50}$
(b) $\sqrt{98}$
(c) $\sqrt{40}$
(d) $\sqrt{58}$
(e) I don't know
7. 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
8. A straight line has a gradient of -2 and passes through the point (4, 1). What is its equation?
- (a) $y + 2x - 9 = 0$
(b) $y = 2x - 6$
(c) $y + 2x = 6$
(d) $2y = x - 2$
(e) I don't know
9. The lines $y = 5x - 3$ and $y = 2x + 9$ intersect at P. What are the coordinates of P?
- (a) (2, 7)
(b) (2, 13)
(c) (4, 17)
(d) (-4, -23)
(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