

Non-Calculator Questions

Coordinate Geometry

Coordinates / Midpoint of a Line / Gradient of a Line / Length of a Line

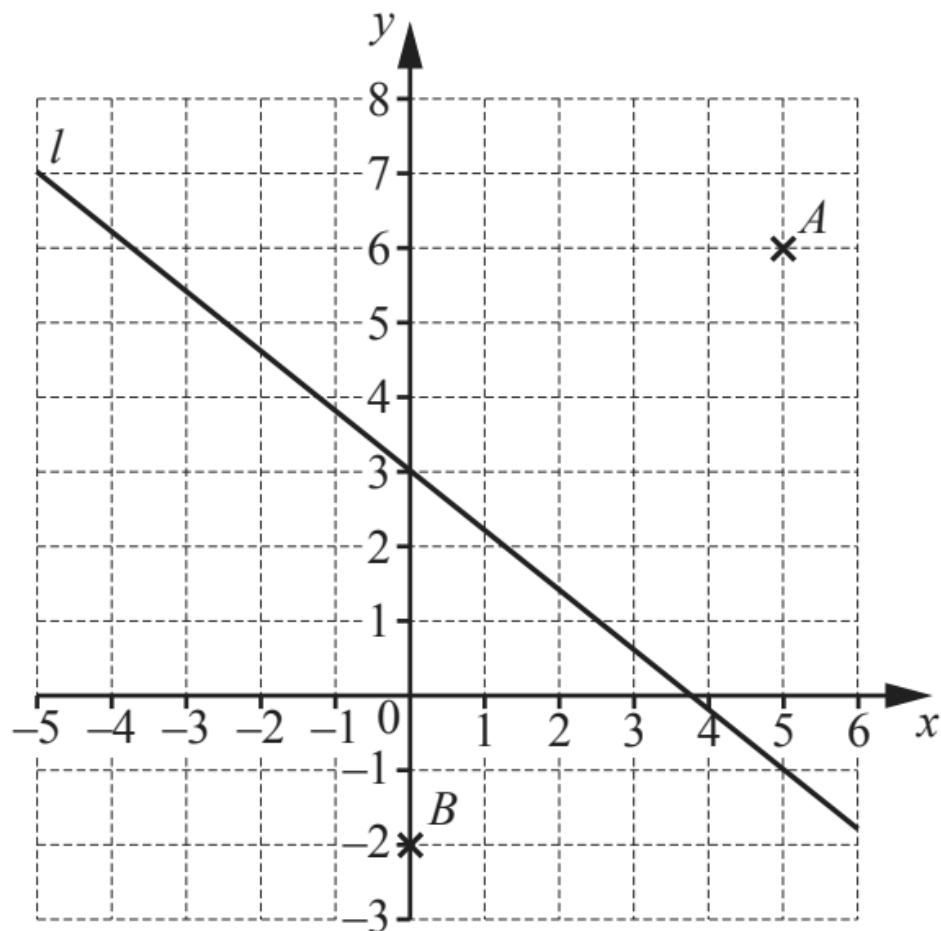
Easy (5 questions)	/8
Medium (3 questions)	/6
Hard (5 questions)	/16
Total Marks	/30

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Easy Questions

1



Write down the co-ordinates of A.

(..... ,)

(1 mark)

2 A line joins $A(1, 3)$ to $B(5, 8)$.

Find the midpoint of AB .

(..... ,)

(2 marks)

- 3** The point A has coordinates $(5, -4)$
The point B has coordinates $(13, 1)$

Work out the coordinates of the midpoint of AB .

(2 marks)

- 4** Find the gradient of the straight line with equation $5x + 2y = 7$

(2 marks)

- 5** Line L has equation $y = 2 - 3x$

Write down the gradient of line L .

(1 mark)

Medium Questions

- 1 Find the mid-point of AB where $A = (w, r)$ and $B = (3w, t)$.

Give your answer in its simplest form in terms of w , r and t .

(.....,)

(2 marks)

- 2 A is the point $(2, 3)$ and B is the point $(7, -5)$.

Find the co-ordinates of the midpoint of AB .

(.....,)

(2 marks)

- 3 Point A has coordinates $(5, 8)$
Point B has coordinates $(9, -4)$

Work out the gradient of AB .

(2 marks)

Hard Questions

- 1 A straight line joins the points $(3k, 6)$ and $(k, -5)$. The line has a gradient of 2.

Find the value of k .

$k = \dots\dots\dots$

(3 marks)

- 2 P is the point $(16, 9)$ and Q is the point $(22, 24)$.

N is the point on PQ such that $PN = 2NQ$.

Find the co-ordinates of N .

(..... ,)

(2 marks)

- 3 (a) A and B are two points.

Point A has coordinates $(-2, 4)$.

Point B has coordinates $(8, 9)$.

C is the midpoint of the line segment AB .

Find the coordinates of C .

(2 marks)

(b) D is the point with coordinates $(100, 56)$.

Does point D lie on the straight line that passes through A and B ?
You must show how you work out your answer.

(3 marks)

4 The points A , B and C lie in order on a straight line.

The coordinates of A are $(2, 5)$

The coordinates of B are $(4, p)$

The coordinates of C are $(q, 17)$

Given that $AC = 4AB$, find the values of p and q .

(3 marks)

5 A and B are straight lines.

Line A has equation $2y = 3x + 8$

Line B goes through the points $(-1, 2)$ and $(2, 8)$

Do lines A and B intersect?

You must show all your working.

(3 marks)