



AS Mathematics Exam Questions by Topic
Chapter 5a: Coordinate Geometry - Straight Lines

These questions are taken from the Specimen Exam materials and the real 2018 papers for the new syllabus AS and A-level mathematics courses and arranged by chapter of the textbooks by Goldie et al (available here: <https://amzn.to/39umfr5> and <https://amzn.to/3hE8kBL>). There are a mixture of questions from OCR A, OCR B (MEI) and Edexcel. Although the style of questions varies a little across the exam boards the content of the syllabus is almost identical so these are suitable for students preparing for any exam board.

Free problem sets for all other chapters, as well as video solutions, full past papers and other content for GCSE and A-level maths can be found at:

<https://mathsaurus.com/>

Edexcel AS 2018 Paper 1 Question 4:

4. The line l_1 has equation $4y - 3x = 10$

The line l_2 passes through the points $(5, -1)$ and $(-1, 8)$.

Determine, giving full reasons for your answer, whether lines l_1 and l_2 are parallel, perpendicular or neither.

(4)

Edexcel AS Sample Paper 1 Question 1:

1. The line l passes through the points $A(3, 1)$ and $B(4, -2)$.

Find an equation for l .

(3)

Edexcel Sample Paper 2 Question 8:

8.

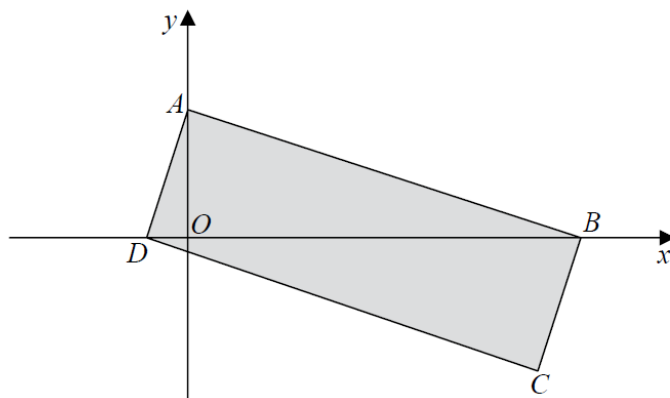


Figure 1

Figure 1 shows a rectangle $ABCD$.

The point A lies on the y -axis and the points B and D lie on the x -axis as shown in Figure 1.

Given that the straight line through the points A and B has equation $5y + 2x = 10$

(a) show that the straight line through the points A and D has equation $2y - 5x = 4$ (4)

(b) find the area of the rectangle $ABCD$. (3)

OCR A 2018 Paper 1 Question 1:

- 1 The points A and B have coordinates $(1, 5)$ and $(4, 17)$ respectively. Find the equation of the straight line which passes through the point $(2, 8)$ and is perpendicular to AB . Give your answer in the form $ax + by = c$, where a , b and c are constants. [4]
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