

Modulus of Linear Function

Difficulty: Medium

Question Paper 1

Level	A Level
Subject	Maths Pure 3
Exam Board	CIE
Topic	Algebra
Sub-Topic	Modulus of Linear Function
Difficulty	Medium
Booklet	Question Paper 1

Time allowed: 41 minutes

Score: /29

Percentage: /100

Grade Boundaries:

A*	A	B	C	D	E
>90%	81%	70%	58%	46%	34%

Question 1

(a) Sketch the graph of $y = |2x - 3|$. [1]

(b) Solve the inequality $3x - 1 > |2x - 3|$. [3]

Question 2

Solve the inequality $|2x - 5| > 3|2x + 1|$.

[4]

Question 3

Solve the inequality $|x - 4| < 2|3x + 1|$.

[4]

Question 4

(i) Solve the equation $2|x - 1| = 3|x|$.

[3]

(ii) Hence solve the equation $2|5^x - 1| = 3|5^x|$, giving your answer correct to 3 significant figures.

[2]

Question 5

Solve the inequality $2|x - 2| > |3x + 1|$.

[4]

Question 6

Solve the inequality $|2x + 1| < 3|x - 2|$.

[4]

Question 7

Solve the inequality $|2x + 1| < |x|$.

[4]