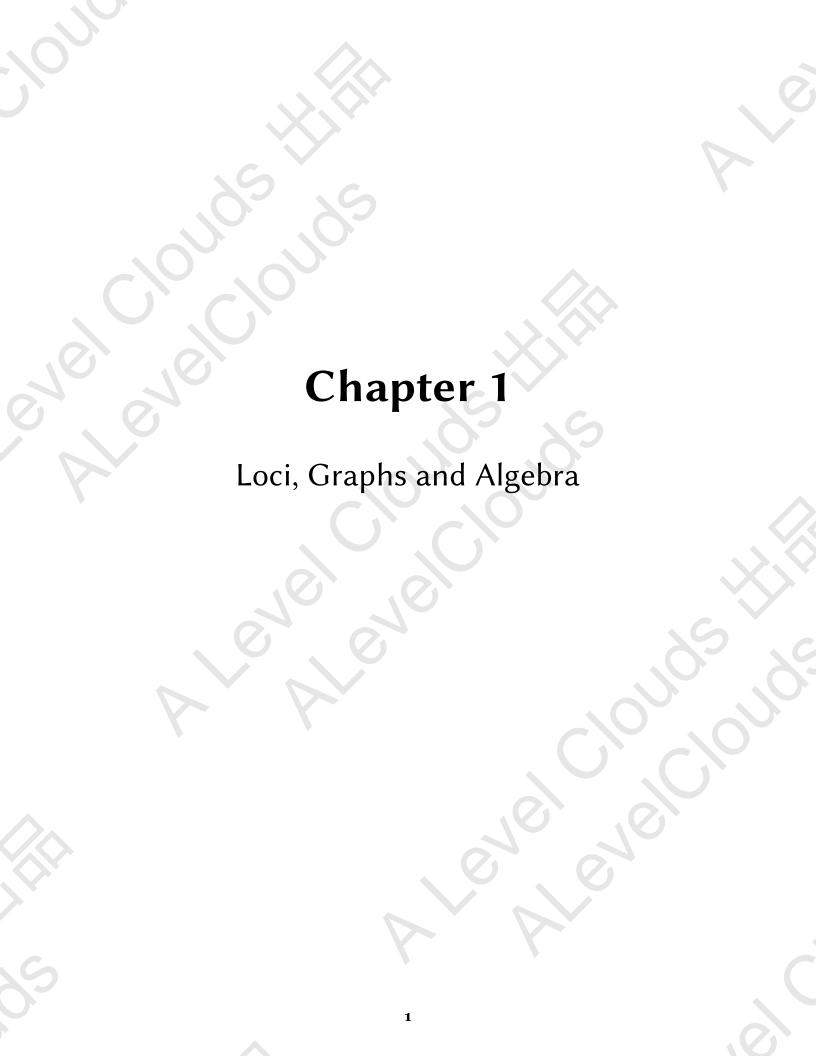
AQA Further Pure Mathematics 1

分类真题

2018-2022 册

A Level Clouds 出品

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Q1: 2018/June/FP1

has equation

$$\frac{x^2}{a^2} - \frac{y^2}{b^2} = 1$$

where a and b are positive constants.

 H_{1} intersects the $x\mathrm{-axis}$ at the points (6, 0) and (–6, 0)

The asymptotes of H_1 have equations

$$y = \frac{2}{3} x \quad \text{and} \quad y = -\frac{2}{3} x$$

8 (a) Find the values of a and b .		[2 marks]
	10, 10,	
	C/O 10,	

8 (b)	The hyperbola H_1 is translated by the vector $\begin{bmatrix} 4 \\ 0 \end{bmatrix}$ to give the hyperbola H_2
8 (b) (i)	Write down the equation of ${\cal H}_2$ [1 mark]
C	
	Answer
8 (b) (ii)	Show that, if the line $y = mx$ intersects H_2 , then the x -coordinates of the points of intersection must satisfy the equation $(4-9m^2) x^2 - 32x - 80 = 0$
	[3 marks]

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260
(0)

Q2: 2018/June/FP1

10	A curve C has the equation	
	$y=\frac{(x+5)(x+1)}{x(x-4)}$	
	x(x-4)	
10 (a)	State the equations of the asymptotes of ${\it C}$.	[3 marks]
		[o marko]
		\triangle
	3	
X		75
	Answer	<u> </u>

10 (b)	The line $y = k$ intersects the curve C .
10 (b) (i)	Show that
	$4k^2 + 17k + 4 \ge 0$ [4 marks]
	[# marks]
C	3 25

10 (b) (ii	Hence find the coordinates of the stationary points of the curve C .	
	No credit will be given for solutions using differentiation.	
	[5 marks]	
	25	
4		
	16	
6		
	Answer	
	Answer	
<i>></i>		