

AQA  
Pure Mathematics 2  
分类真题  
2019-2022 册

A Level Clouds 出品

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# **Chapter 1**

## **Functions**

**3 (a)** The polynomial  $f(x)$  is defined by

$$f(x) = 4x^3 + bx^2 + cx + 6$$

where  $b$  and  $c$  are constants.

When  $f(x)$  is divided by  $(2x - 3)$  the remainder is  $-6$

When  $f(x)$  is divided by  $(2x + 1)$  the remainder is 10

Find the value of  $b$  and the value of  $c$ .

**[4 marks]**

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$$b = \underline{\hspace{2cm}} \quad c = \underline{\hspace{2cm}}$$

**3 (b)**

Simplify  $\frac{4x^2 - 1}{4x^2 + 4x - 3}$ , giving your answer in the form  $1 + g(x)$ .

**[4 marks]**

Answer

9 The function  $f$  is defined by

$$f(x) = |x^2 - 5| - 3 \quad \text{for } -5 \leq x \leq 5$$

9 (a) (i) Write down the range of  $f$ .

[1 mark]

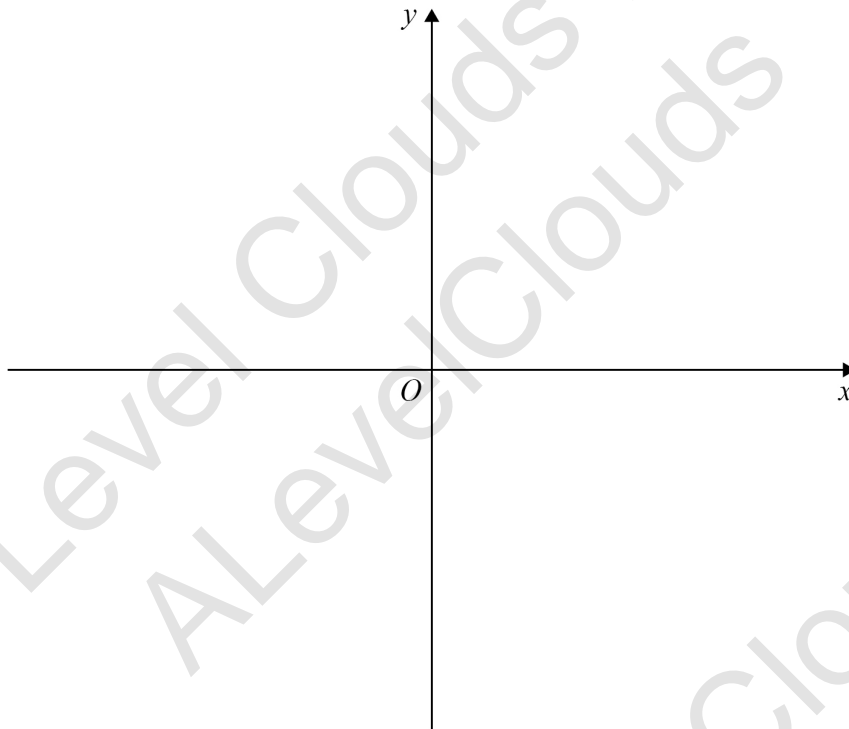
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Answer \_\_\_\_\_

9 (a) (ii) Sketch the graph of  $y = f(x)$ , indicating the value where the curve crosses the  $y$ -axis.

[3 marks]



**9 (a) (iii)** Solve  $f(x) = 1$

**[3 marks]**

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Answer \_\_\_\_\_

**9 (b)** The function  $g$  is defined by

$$g(x) = \frac{1}{x} \quad \text{where } x \neq 0$$

**9 (b) (i)** Find an expression for  $fg(x)$ .

**[1 mark]**

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Answer \_\_\_\_\_

**9 (b) (ii)** Solve  $fg(x) < 0$

**[3 marks]**

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Answer \_\_\_\_\_