

CIE  
Pure Mathematics 3

分类真题  
2020-2022 册

A Level Clouds 出品

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# **Chapter 1**

P2: Algebra

**Q1: 9709/32/M20**

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

[1]

- (b) Solve the inequality  $|x - 2| < 3x - 4$ .

[3]

**Q2: 9709/32/S20**

- 1 Find the quotient and remainder when  $6x^4 + x^3 - x^2 + 5x - 6$  is divided by  $2x^2 - x + 1$ .

[3]

**Q3: 9709/33/S20**

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

[4]

**Q4: 9709/31/W20**

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

[4]

**Q5: 9709/32/M21**

- 2 The polynomial  $ax^3 + 5x^2 - 4x + b$ , where  $a$  and  $b$  are constants, is denoted by  $p(x)$ . It is given that  $(x + 2)$  is a factor of  $p(x)$  and that when  $p(x)$  is divided by  $(x + 1)$  the remainder is 2.

Find the values of  $a$  and  $b$ .

[5]

**Q6: 9709/31/S21**

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

[4]

**Q7: 9709/32/S21**

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

[4]

**Q8: 9709/32/W21**

- 2 Solve the inequality  $|3x - a| > 2|x + 2a|$ , where  $a$  is a positive constant.

[4]

**Q9: 9709/33/W21**

- 1 Find the quotient and remainder when  $2x^4 + 1$  is divided by  $x^2 - x + 2$ .

[3]