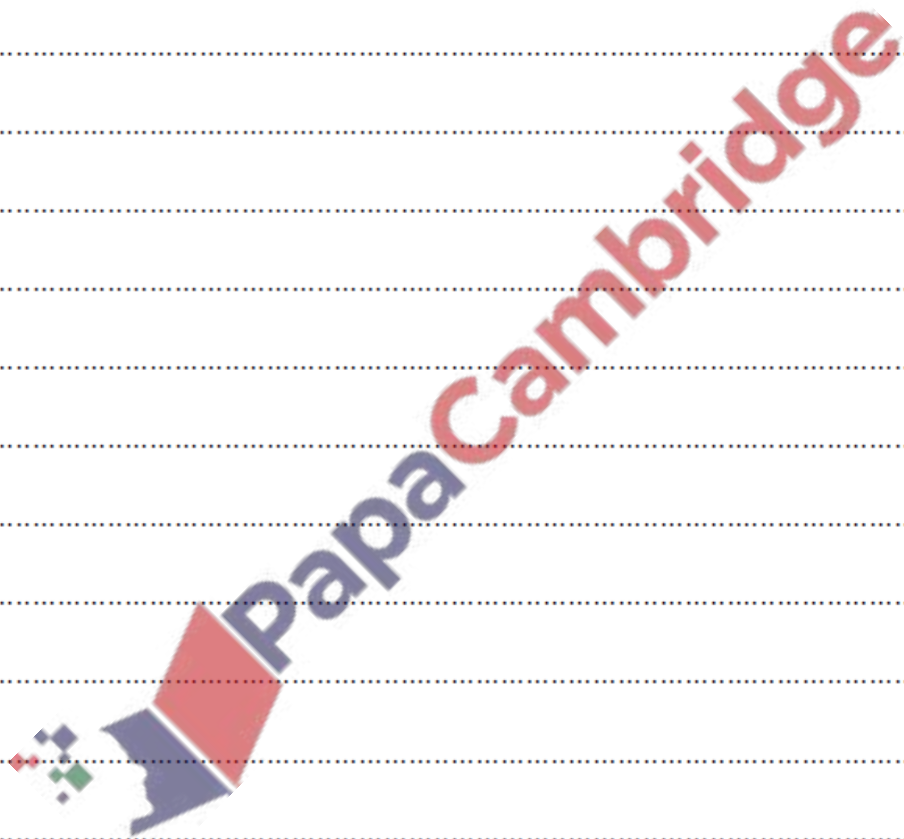


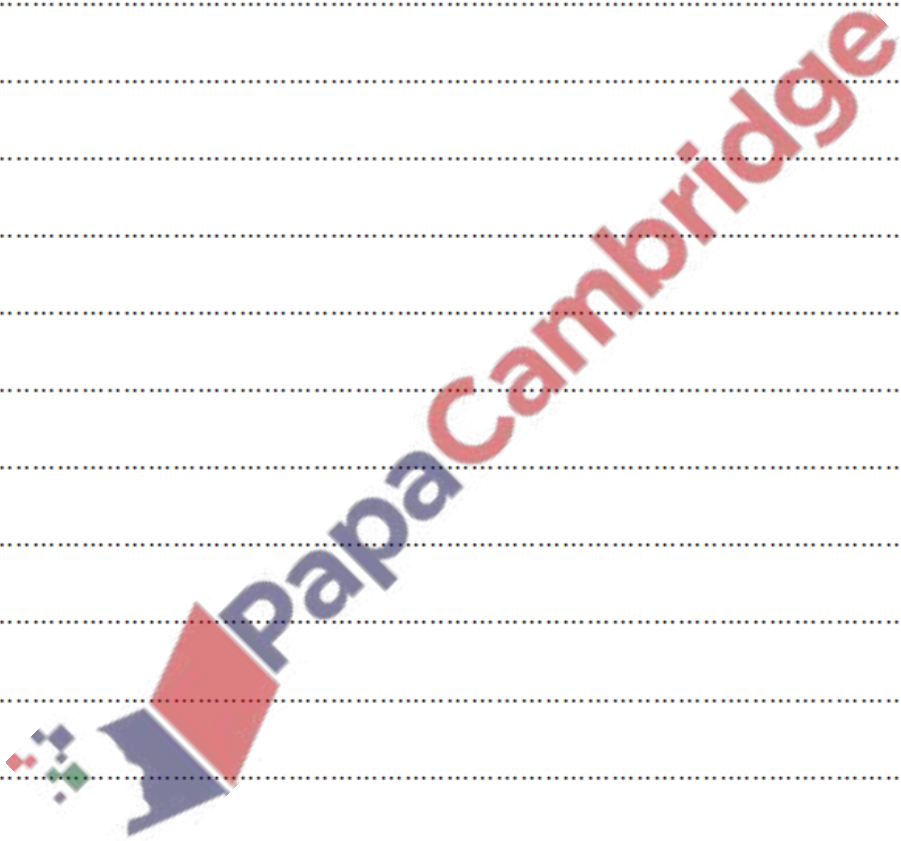
(a) Find the quotient and remainder when $8x^3 + 4x^2 + 2x + 7$ is divided by $4x^2 + 1$.

[3]



(b) When a and b have these values, factorise $p(x)$ completely.

[3]



4. June/2022/Paper_9709/32/No.3

The polynomial $ax^3 + x^2 + bx + 3$ is denoted by $p(x)$. It is given that $p(x)$ is divisible by $(2x - 1)$ and that when $p(x)$ is divided by $(x + 2)$ the remainder is 5.

Find the values of a and b .

[5]

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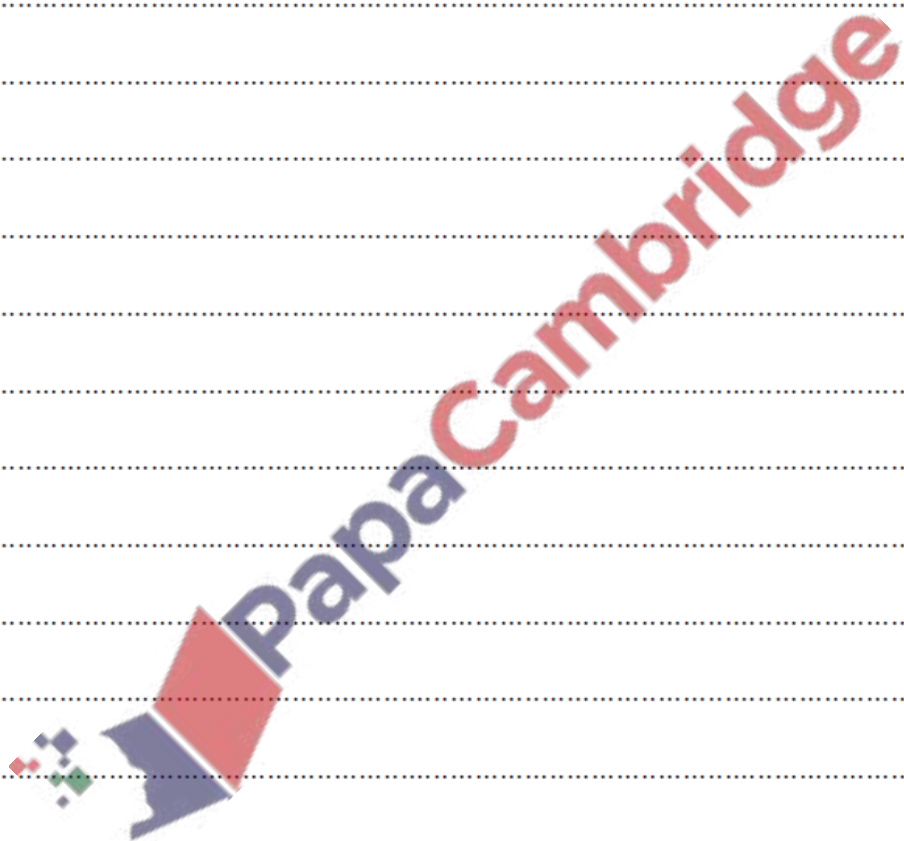
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5. June/2022/Paper_9709/33/No.1

Find, in terms of a , the set of values of x satisfying the inequality

$$2|3x + a| < |2x + 3a|,$$

where a is a positive constant.

[4]

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