

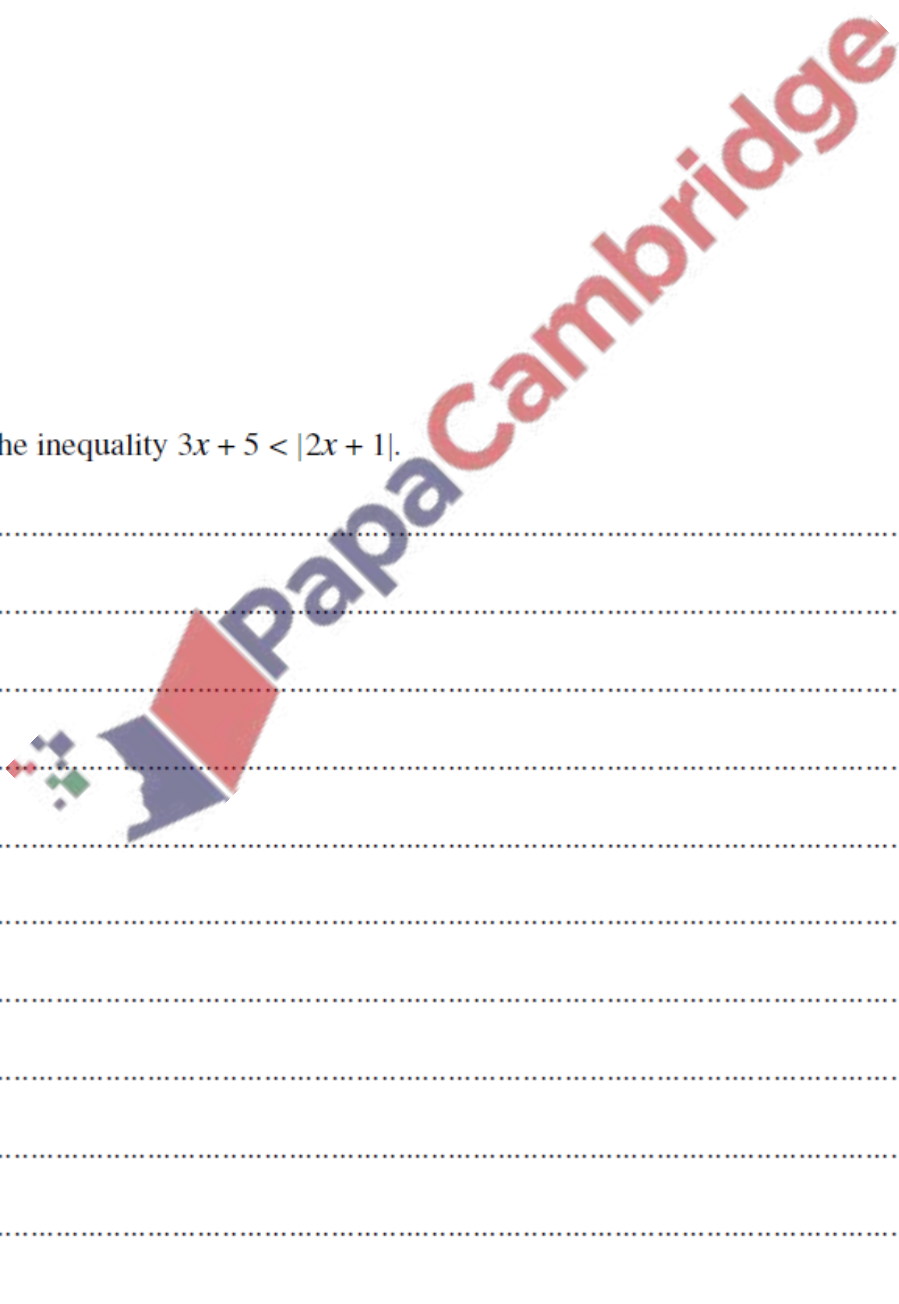
1. Nov/2022/Paper\_9709\_31/No.1

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

[1]

(b) Solve the inequality  $3x + 5 < |2x + 1|$ .

[3]



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The polynomial  $2x^3 - x^2 + a$ , where  $a$  is a constant, is denoted by  $p(x)$ . It is given that  $(2x + 3)$  is a factor of  $p(x)$ .

- (a) Find the value of  $a$ . [2]

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- (b) When  $a$  has this value, solve the inequality  $p(x) < 0$ . [4]

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