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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2. Nov/2022/Paper_9709_32/No.2

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

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

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