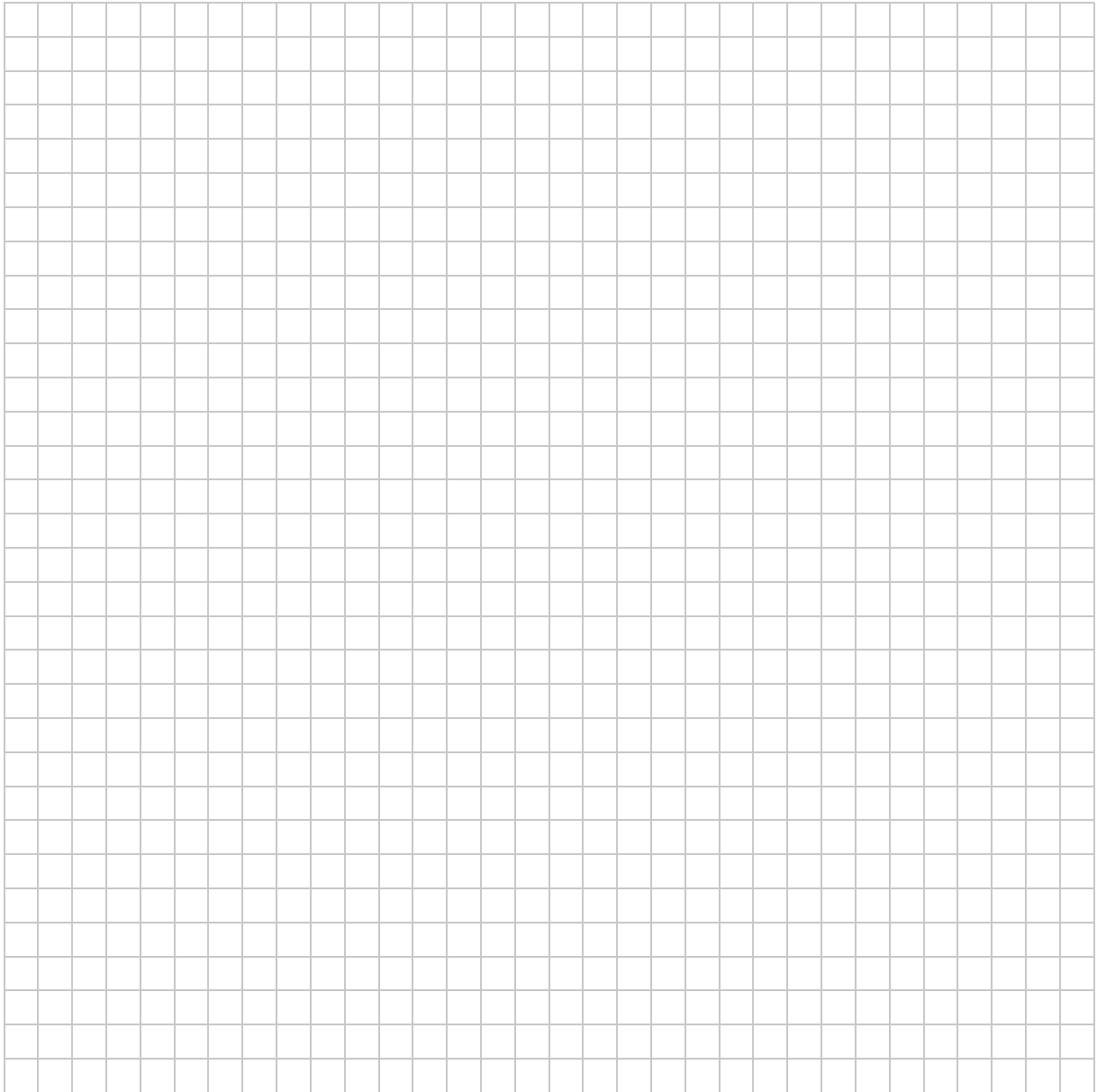


Question 5

(25 marks)

The function f is such that $f(x) = 2x^3 + 5x^2 - 4x - 3$, where $x \in \mathbb{R}$.

(a) Show that $x = -3$ is a root of $f(x)$ **and** find the other two roots.



- (b) Find the co-ordinates of the local maximum point **and** the local minimum point of the function f .

Local maximum point:	Local minimum point:

- (c) $f(x) + a$, where a is a constant, has only one real root.
Find the range of possible values of a .

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