Question 4 **(25 marks)**

(a) Differentiate the function $2x^2 - 3x - 6$ with respect to x from first principles.

(b) Let $f(x) = \dfrac{2x}{x+2},\ x \neq -2,\ x \in \mathbb{R}$. Find the co-ordinates of the points at which the slope of the tangent to the curve $y = f(x)$ is $\dfrac{1}{4}$.