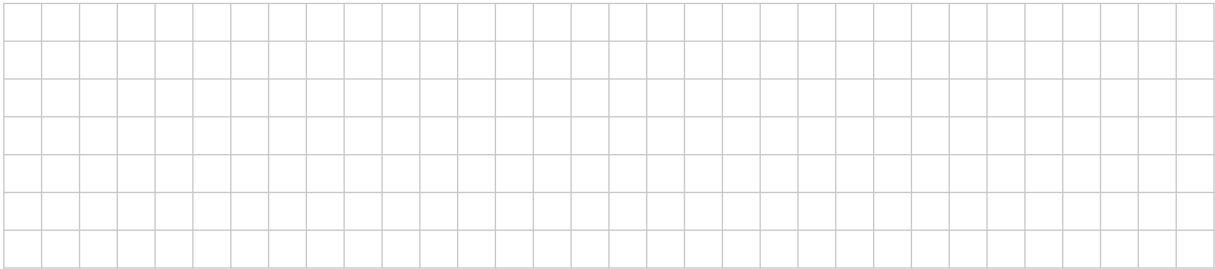


Question 5

(25 marks)

(a) Find $\int 5 \cos 3x \, dx$.



(b) The slope of the tangent to a curve $y = f(x)$ at each point (x, y) is $2x - 2$.
The curve cuts the x -axis at $(-2, 0)$.

(i) Find the equation of $f(x)$.



(ii) Find the average value of f over the interval $0 \leq x \leq 3, x \in \mathbb{R}$.



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