

10.14 $\left(f(x) g(x)\right)' = f'(x) g(x) + f(x) g'(x)$

$$f(x) g(x) = \int \left(f'(x) g(x) + f(x) g'(x)\right) dx = \int f'(x) g(x) dx + \int f(x) g'(x) dx$$

$$f(x) g(x) - \int f(x) g'(x) = \int f'(x) g(x) dx$$