Section 6.2: Integration by Substitution

Example: Compute these indefinite integrals.

A) $\int 4x(2x^2 + 1)^{30} \, dx =$

B) $\int (x^3 + 3)(x^4 + 12x + 1)^5 \, dx =$

C) $\int \frac{15x^2 + 10}{(x^3 + 2x)^2} \, dx =$

D) $\int 20x^2 e^{x^3+1}\ dx =$

E) $\int \dfrac{2xe^{x^2} + 3e^{3x}}{e^{x^2} + e^{3x}}\ dx =$

F) $\int \dfrac{1}{x\ln(x)}\ dx =$

G) $\displaystyle\int \frac{x}{(x+4)^3}\,dx =$