Integration by Substitution

Substitution is used to integrate composite functions as well as some complex functions. It involves rewriting the integrand in terms of a different variable defined in terms of the one originally used.

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5 6 7 8 9 10

Solve the differential $\int\left(4x^3 + 2x\right)^5\left(12x^2 + 2\right)dx$

Integration by Substitution

Find $\int 3\sqrt{3x+1}\,dx$

Find the definite integral $\int_4^7 \dfrac{2t}{\left(t^2-3\right)^3}\, dt$

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Find the indefinite integral $\int x\sqrt{3x^2 - 2}\, dx$

Find $\displaystyle \int_2^4 \frac{x^2}{\sqrt{2x^3-5}}\, dx$

Solve the differential $\int \cos x \sin x \, dx$

Find the integral $\int \sec^2 x \tan x \, dx$

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Find $\int_0^{\pi/4} \frac{\sin p}{\tan p}\,dp$

Find $\int \dfrac{x}{(3x-1)^3}\, dx$

Find $\int 3x(x+4)^7\,dx$