

Integration Formulas

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Example 1.1

Consider $f(x) = (x^3 + 1)^5$. Find $f'(x)$.

Example 1.2

Integrate $f'(x) = 5(x^3 + 1)^4 \cdot 3x^2$.

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Example 1.3

$$\int 2x\sqrt{x^2 - 5} dx$$

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Example 1.4

$$\int x(x^2 + 1)^6 dx$$

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Example 1.5

$$\int 3x(x^2 + 1)^4 dx$$

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Example 1.6

$$\int_0^2 \frac{x}{\sqrt{1 + 2x^2}} dx$$

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Example 1.7

$$\int e^{3x+4} dx$$

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Example 1.8

$$\int \frac{1}{3x+4} dx$$

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