Section 25.2: The Indefinite Integral

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11:09 AM

notation for antiderivatives:

$$\int f(x)\,dx = F(x) + C$$

C: a constant

$\int f(x)\,dx$: "the integral of $f(x)\,dx$"

$F(x)$: antiderivative

[for $F'(x) = f(x)$]

the dx indicates what variable you are integrating with respect to

example:

$$\int x^4\,dx = \frac{1}{5}x^5 + C$$

$$\int \cos\theta\,d\theta = \sin\theta + C$$

$$\int e^y\,dy = e^y + C$$