

Integrals to Know

- $\int x^n dx = \frac{1}{n+1}x^{n+1} + C, \quad n \neq -1$
- $\int \frac{1}{x} dx = \ln |x| + C$
- $\int \sin x dx = -\cos x + C$
- $\int \cos x dx = \sin x + C$
- $\int \tan x dx = \ln |\sec x| + C$
- $\int \cot x dx = -\ln |\csc x| + C$
- $\int \sec x dx = \ln |\sec x + \tan x| + C$
- $\int \csc x dx = -\ln |\csc x + \cot x| + C$
- $\int \sec^2 x dx = \tan x + C$
- $\int \csc^2 x dx = -\cot x + C$
- $\int e^x dx = e^x + C$
- $\int a^x dx = \frac{a^x}{\ln a} + C$
- $\int \frac{1}{\sqrt{1-x^2}} dx = \arcsin x + C$
- $\int -\frac{1}{\sqrt{1-x^2}} dx = \arccos x + C$
- $\int \frac{1}{1+x^2} dx = \arctan x + C$
- $\int -\frac{1}{1+x^2} dx = \operatorname{arccot} x + C$
- $\int \frac{1}{|x|\sqrt{x^2-1}} dx = \operatorname{arcsec} x + C$
- $\int -\frac{1}{|x|\sqrt{x^2-1}} dx = \operatorname{arccsc} x + C$
- $\int \sec x \tan x dx = \sec x + C$
- $\int \csc x \cot x dx = -\csc x + C$
- $\int \ln x dx = x \ln x - x + C$
- $\int \log_a x dx = \frac{x \ln x - x}{\ln a} + C$