

Table of indefinite integrals

1. $\int adx = ax + C$, a is a constant
2. $\int xdx = \frac{x^2}{2} + C$
3. $\int x^n dx = \frac{x^{n+1}}{n+1} + C, n \neq -1$
4. $\int \frac{dx}{x} = \ln|x| + C$
5. $\int e^x dx = e^x + C$
6. $\int a^x dx = \frac{a^x}{\ln a} + C$
7. $\int \ln x dx = x \ln x - x + C$
8. $\int \sin x dx = -\cos x + C$
9. $\int \cos x dx = \sin x + C$
10. $\int \tan x dx = -\ln|\cos x| + C = \ln|\sec x| + C$
11. $\int \cot x dx = \ln|\sin x| + C = -\ln|\csc x| + C$
12. $\int \sec^2 x dx = \tan x + C$
13. $\int \csc^2 x dx = -\cot x + C$
14. $\int \sec x \tan x dx = \sec x + C$
15. $\int \csc x \cot x dx = -\csc x + C$
16. $\int \frac{dx}{\sqrt{a^2 - x^2}} = \arcsin \frac{x}{a} + C$
17. $\int \frac{dx}{\sqrt{x^2 + a^2}} = \ln|x + \sqrt{x^2 + a^2}| + C$
18. $\int \frac{dx}{x^2 + a^2} = \frac{1}{a} \arctan \frac{x}{a} + C$
19. $\int \frac{dx}{x^2 - a^2} = \frac{1}{2a} \ln \left| \frac{x-a}{x+a} \right| + C$
20. $\int \sqrt{a^2 - x^2} dx = \frac{a^2}{2} \sin^{-1} \frac{x}{a} + \frac{x}{2} \sqrt{a^2 - x^2} + C$
21. $\int \sqrt{x^2 \pm a^2} dx = \frac{1}{2} x \sqrt{x^2 \pm a^2} \pm \frac{1}{2} a^2 \ln|x + \sqrt{x^2 \pm a^2}| + C$
22. $\int \sec x dx = \ln|\sec x + \tan x| + C$
23. $\int \csc x dx = \ln|\csc x - \cot x| + C$