

Formulas for Integrals

1. $\int x^n dx = \frac{x^{n+1}}{n+1} + C, \quad n \neq -1$
2. $\int cf(x) dx = c \int f(x) dx$
3. $\int (f(x) \pm g(x)) dx = \int f(x) dx \pm \int g(x) dx$
4. $\int \cos(x) dx = \sin(x) + C$
5. $\int \sin(x) dx = -\cos(x) + C$
6. $\int \sec^2(x) dx = \tan(x) + C$
7. $\int \csc^2(x) dx = -\cot(x) + C$
8. $\int \sec(x) \tan(x) dx = \sec(x) + C$
9. $\int \csc(x) \cot(x) dx = -\csc(x) + C$
10. $\int e^x dx = e^x + C$
11. $\int \frac{dx}{x} = \ln(x) + C$
12. $\int a^x dx = \frac{a^x}{\ln(a)} + C$
13. $\int \frac{1}{\sqrt{1-x^2}} dx = \sin^{-1}(x) + C$
14. $\int \frac{1}{1+x^2} dx = \tan^{-1}(x) + C$
15. $\int \frac{1}{|x|\sqrt{x^2-1}} dx = \sec^{-1}(x) + C$