Integral Calculus Formulas

Similar to differentiation formulas, we have integral formulas as well. Let us go ahead and look at some of the integral calculus formulas.

- $\int a\,dx = ax + C$
- $\int \frac{1}{x}\,dx = \ln|x| + C$
- $\int e^x\,dx = e^x + C$
- $\int a^x\,dx = \frac{e^x}{\ln a} + C$
- $\int \ln x\,dx = x\ln x - x + C$
- $\int \sin\,x\,dx = -\cos\,x + C$
- $\int \cos\,x\,dx = \sin\,x + C$
- $\int \tan\,dx = \ln|\sec\,x| + C \; or \; -\ln|\cos\,x| + C$
- $\int \cot\,x\,dx = \ln|\sin\,x| + C$
- $\int \sec\,x\,dx = \ln|\sec\,x + \tan\,x| + C$
- $\int \csc\,x\,dx = \ln|\csc\,x - \cot\,x| + C$
- $\int \sec^2\,x\,dx = \tan\,x + C$
- $\int \sec\,x\,\tan\,x\,dx = \sec\,x + C$
- $\int \csc^2\,x\,dx = -\cot\,x + C$
- $\int \tan^2\,x\,dx = \tan\,x - x + C$
- $\int \frac{dx}{\sqrt{a^2 - x^2}} = \arcsin\left(\frac{x}{a}\right) + C$
- $\int \frac{dx}{\sqrt{a^2 + x^2}} = \frac{1}{a}\arcsin\left(\frac{x}{a}\right) + C$