Integration Formulas

I have collected some of the most basic and important integration formulas here. These are the ones that you'll get to use every day.

$$\int x^n dx = \frac{x^{n+1}}{n+1} + C$$

$$\int e^x dx = e^x + C$$

$$\int \frac{1}{x} dx = \ln|x| + C$$

$$\int \sin x \, dx = -\cos x + C$$

$$\int \cos x \, dx = \sin x + C$$

$$\int \sec^2 x \, dx = \tan x + C$$

$$\int \csc^2 x \, dx = -\cot x + C$$

$$\int \sec x \tan x\, dx = \sec x + C$$

$$\int \csc x \cot x\, dx = -\csc x + C$$

$$\int (ax + b)^n\, dx = \frac{1}{a} \cdot \frac{(ax + b)^{n+1}}{n + 1} + C$$

$$\int e^{ax+b}\, dx = \frac{1}{a} \cdot e^{ax+b} + C$$

$$\int \frac{1}{ax + b}\, dx = \frac{1}{a} \cdot \ln |ax + b| + C$$

$$\int \sin (ax + b)\, dx = -\frac{1}{a} \cos (ax + b) + C$$

$$\int \cos (ax + b)\, dx = \frac{1}{a} \sin (ax + b) + C$$

$$\int \sec^2 (ax + b)\, dx = \frac{1}{a} \cdot \tan (ax + b) + C$$

$$\int \csc{(ax + b)} \cot{(ax + b)} \, dx = -\frac{1}{a} \cdot \csc{(ax + b)} + C$$

$$\int \csc^2{(ax + b)} \, dx = -\frac{1}{a} \cdot \cot{(ax + b)} + C$$

$$\int \sec{(ax + b)} \tan{(ax + b)} \, dx = \frac{1}{a} \cdot \sec{(ax + b)} + C$$