

Table of Provided Formulas

Sum Formulas:

$$\sin(x + y) = \sin(x) \cos(y) + \cos(x) \sin(y)$$

$$\cos(x + y) = \cos(x) \cos(y) - \sin(x) \sin(y)$$

Integrals:

$$\bullet \int \tan(u) \, du = \ln |\sec(u)| + C$$

$$\bullet \int \sec(u) \, du = \ln |\sec(u) + \tan(u)| + C$$

$$\bullet \int \cot(u) \, du = \ln |\sin(u)| + C$$

$$\bullet \int \csc(u) \, du = \ln |\csc(u) - \cot(u)| + C$$

$$\bullet \int \sin^n(u) \, du = -\frac{1}{n} \sin^{n-1}(u) \cos(u) + \frac{n-1}{n} \int \sin^{n-2}(u) \, du$$

$$\bullet \int \cos^n(u) \, du = \frac{1}{n} \cos^{n-1}(u) \sin(u) + \frac{n-1}{n} \int \cos^{n-2}(u) \, du$$

$$\bullet \int \tan^n(u) \, du = \frac{1}{n-1} \tan^{n-1}(u) - \int \tan^{n-2}(u) \, du$$

$$\bullet \int \sec^n(u) \, du = \frac{1}{n-1} \sec^{n-2}(u) \tan(u) + \frac{n-2}{n-1} \int \sec^{n-2}(u) \, du$$

$$\bullet \int \sin(au) \sin(bu) \, du = \frac{\sin((a-b)u)}{2(a-b)} - \frac{\sin((a+b)u)}{2(a+b)}$$

$$\bullet \int \sin(au) \cos(bu) \, du = -\frac{\cos((a-b)u)}{2(a-b)} - \frac{\cos((a+b)u)}{2(a+b)}$$

$$\bullet \int \cos(au) \cos(bu) \, du = \frac{\sin((a-b)u)}{2(a-b)} + \frac{\sin((a+b)u)}{2(a+b)}$$