1 Trig Functions

1.

$$\int \sin(ax+b)dx$$

$u = ax + b$

$du = adx$

$$\frac{1}{a}du = dx$$

$$\int \frac{1}{a}\sin(u)du$$

$$\frac{1}{a}(-\cos(u)) + C$$

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

2.

$$\int \tan(x)dx$$

$$\int \frac{\sin(x)}{\cos(x)}dx$$

$u = \cos(x)$

$du = -\sin(x)dx$

$$-\int \frac{1}{u}du$$

$$-\ln|u| + C$$

$$-\ln|\cos(x)| + C$$

3.

$$\int \csc(x)dx$$

$$\int \frac{1}{\sin(x)}dx$$

4.

$$\int \sec(x)dx$$

5.

$$\int \cot(x)dx$$

6.

$$\int \arcsin(x)dx$$

7.

$$\int \arccos(x)dx$$

8.

$$\int \arctan(x)dx$$

9.

$$\int arccot(x)dx$$

10.

$$\int arcsec(x)dx$$

11.

$$\int arccsc(x)dx$$