

Integral Table:

$$1.) \int u^n du = \frac{1}{n+1} u^{n+1} + C \quad n \neq -1$$

$$2.) \int \frac{du}{u} = \int \frac{1}{u} du = \ln|u| + C$$

$$3.) \int e^u du = e^u + C$$

$$4.) \int \cos u du = \sin u + C$$

$$5.) \int \sin u du = -\cos u + C$$

$$6.) \int \sec^2 u du = \tan u + C$$

$$7.) \int \csc^2 u du = -\cot u + C$$

$$8.) \int \sec u \tan u du = \sec u + C$$

$$9.) \int \csc u \cot u du = -\csc u + C$$

$$10.) \int \frac{du}{\sqrt{1-u^2}} = \int \frac{1}{\sqrt{1-u^2}} du = \sin^{-1} u + C$$

$$11.) \int \frac{du}{1+u^2} = \tan^{-1} u + C$$

$$12.) \int \frac{du}{u\sqrt{u^2-1}} = \sec^{-1}|u| + C$$