

Integral Forms

Memorize the following integral forms.

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

$$7. \quad \int e^x dx = e^x + C$$

$$2. \quad \int \sin(x) dx = -\cos(x) + C$$

$$8. \quad \int \frac{1}{x} dx = \ln|x| + C$$

$$3. \quad \int \cos(x) dx = \sin(x) + C$$

$$9. \quad \int k dx = kx + C$$

$$4. \quad \int \sec^2(x) dx = \tan(x) + C$$

$$10. \quad \int \csc^2(x) dx = -\cot(x) + C$$

$$5. \quad \int \sec(x) \tan(x) dx = \sec(x) + C$$

$$11. \quad \int \csc(x) \cot(x) dx = -\csc(x) + C$$

$$6. \quad \int \frac{1}{x^2+1} dx = \tan^{-1}(x) + C$$

Sum/Difference Formula

$$\int \left[f(x) \pm g(x) \right] dx = \int f(x) dx \pm \int g(x) dx$$

Constant Multiple Rule

$$\int k f(x) dx = k \int f(x) dx$$