Optimization and integrals

anti − derivatives

Basic rules of integrals

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

2. $\int e^n dx = e^x + c$

3. $\int Sinx\, dx = -Cosx + c$

4. $\int cosx\, dx = Sinx + c$

5. $\int \frac{1}{x} dx = lnx + c$

6. $\int Sec^2 x\, dx = tanx + c$

Two Integration

1. Definite Integrals

$$\int_a^b f(x)dx = f(b) - f(a)$$

2. Indefinite Integrals $c = constant$

$$\int f(x)dx = f(x) + c$$