

Let k , n , and a be any real number (constants). Assume that $a > 0$ and that a for formulas 6. The integration constant is denoted as C .

$$1. \quad \int kf(x) dx = k \int f(x) dx$$

$$2. \quad \int [f(x) + g(x)] dx = \int f(x) dx + \int g(x) dx$$

$$3. \quad \int k dx = kx + C$$

$$4. \quad \int x^n dx = \frac{x^{n+1}}{n+1} + C, \quad n \neq -1$$

$$5. \quad \int \frac{1}{x} dx = \int x^{-1} dx = \ln |x| + C$$

$$6. \quad \int e^{kx} dx = \frac{e^{kx}}{k} + C$$

$$7. \quad \int a^x = \frac{a^x}{\ln a} + C$$