



$$1 \quad \int dx = x + C$$

$$2 \quad \int x dx = \frac{x^2}{2} + C$$

$$3 \quad \int x^n dx = \frac{x^{n+1}}{n+1} + C$$

$$4 \quad \int \sqrt{x} dx = \frac{2x\sqrt{x}}{3} + C$$

$$5 \quad \int e^x dx = e^x + C$$

$$6 \quad \int a^x dx = \frac{a^x}{\ln a} + C$$

$$7 \quad \int \frac{1}{x} dx = \ln |x| + C$$

$$8 \quad \int \frac{dx}{x^2 - a^2} = \frac{1}{2a} \ln \left| \frac{x-a}{x+a} \right| + C$$

$$9 \quad \int \frac{dx}{1+x^2} = \operatorname{arctg} x + C$$

$$10 \quad \int \frac{dx}{x^2 + a^2} = \frac{1}{a} \operatorname{arctg} \frac{x}{a} + C$$

$$11 \quad \int \frac{dx}{\sqrt{x^2 + a^2}} = \ln (x + \sqrt{x^2 + a^2}) + C$$

$$12 \quad \int \frac{dx}{\sqrt{x^2 - a^2}} = \ln |x + \sqrt{x^2 - a^2}| + C$$

$$13 \quad \int \frac{dx}{\sqrt{1-x^2}} = \arcsin x + C$$

$$14 \quad \int \frac{dx}{\sqrt{a^2 - x^2}} = \arcsin \frac{x}{a} + C$$

$$15 \quad \int \sin x dx = -\cos x + C$$

$$16 \quad \int \cos x dx = \sin x + C$$

$$17 \quad \int \operatorname{tg} x dx = -\ln |\cos x| + C$$

$$18 \quad \int \operatorname{ctg} x dx = \ln |\sin x| + C$$

$$19 \quad \int \frac{dx}{\cos^2 x} = \operatorname{tg} x + C$$

$$20 \quad \int \frac{dx}{\sin^2 x} = -\operatorname{ctg} x + C$$

$$21 \quad \int \frac{x dx}{\sqrt{x^2 + a^2}} = \sqrt{x^2 + a^2} + C$$

$$22 \quad \int \frac{x dx}{\sqrt{x^2 - a^2}} = \sqrt{x^2 - a^2} + C$$

FORMULE FUNDAMENTALE

LEIBNIZ-NEWTON

$$\int_a^b f(x) dx = F(b) - F(a), \text{ unde } F \text{ e o primitivă a lui } f$$

INTEGRAREA PRIN PĂRȚI

$$\int_a^b f(x)g'(x) dx = f(x)g(x) \Big|_a^b - \int_a^b f'(x)g(x) dx$$

SCHIMBAREA DE VARIABILĂ

$$\int_a^b f(\varphi(t))\varphi'(t) dt = \int_{\varphi(a)}^{\varphi(b)} f(x) dx$$