FORMULARIO DE INTEGRALES BÁSICAS

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

$$2) \int x^n dx = \frac{x^{n+1}}{n+1} + C$$

$$3) \int \frac{dx}{x} = ln|x| + C$$

$$4) \int a^x dx = \frac{a^x}{\ln a} + C$$

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

$$6) \int sen\, x\, dx = -\cos x + C$$

$$7) \int \cos x\, dx = sen\, x + C$$

$$8) \int tg\, x\, dx = -\ln|\cos x| + C$$

$$9) \int ctg\, x\, dx = \ln|sen\, x| + C$$

$$10) \int \sec x\, dx = \ln|\sec x + tg\, x| + C$$

$$11) \int \csc x\, dx = \ln|\csc x - ctg\, x| + C$$

$$12) \int \sec^2 x\, dx = tg\, x + C$$

$$13) \int \csc^2 x\, dx = -ctg\, x + C$$

$$14) \int \sec x \cdot tg\, x\, dx = \sec x + C$$

$$15) \int \csc x \cdot ctg\, x\, dx = -\csc x + C$$

$$16) \int \frac{dx}{\sqrt{a^2 - x^2}} = arcsen\frac{x}{a} + C$$

$$17) \int \frac{dx}{a^2 + x^2} = \frac{1}{a}arctg\frac{x}{a} + C$$

$$18) \int \frac{dx}{x\sqrt{x^2 - a^2}} = \frac{1}{a}arcsec\frac{x}{a} + C$$

$$19) \int \frac{dx}{x^2 - a^2} = \frac{1}{2a}\ln\left|\frac{x-a}{x+a}\right| + C$$

$$20) \int \frac{dx}{a^2 - x^2} = \frac{1}{2a}\ln\left|\frac{a+x}{a-x}\right| + C$$

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

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

$$23) \int \sqrt{a^2 - x^2}\, dx = \frac{x}{2}\sqrt{a^2 - x^2} + \frac{a^2}{2}arcsen\frac{x}{a} + C$$

$$24) \int \sqrt{x^2 - a^2}\, dx = \frac{x}{2}\sqrt{x^2 - a^2} - \frac{a^2}{2}\ln\left|x + \sqrt{x^2 - a^2}\right| + C$$

$$25) \int \sqrt{x^2 + a^2}\, dx = \frac{x}{2}\sqrt{x^2 + a^2} + \frac{a^2}{2}\ln\left|x + \sqrt{x^2 + a^2}\right| + C$$

$$26) \int u \cdot dv = u \cdot v - \int v \cdot du$$