· TABELA DE INTEGRAIS ·

(01) $\int u^n du = \frac{u^{n+1}}{n+1} + k, \forall n \neq -1$; (02) $\int \cos u\,du = \operatorname{sen} u + k$; (03) $\int \operatorname{sen} u\,du = -\cos u + k$; (04) $\int \sec^2 u\,du = \operatorname{tg} u + k$;

(05) $\int \operatorname{cosec}^2 u\,du = -\operatorname{cotg} u + k$; (06) $\int \sec u . \operatorname{tg} u\,du = \sec u + k$; (07) $\int \operatorname{cosec} u . \operatorname{cotg} u\,du = -\operatorname{cosec} u + k$;

(08) $\int \frac{1}{u} du = \ln|u| + k$; (09) $\int e^u du = e^u + k$; (10) $\int a^u du = \frac{a^u}{\ln a} + k, a > 0$ e $a \neq 1$; (11) $\int \operatorname{tg} u\,du = \ln|\sec u| + k$;

(12) $\int \operatorname{cotg} u\,du = \ln|\operatorname{sen} u| + k$; (13) $\int \sec u\,du = \ln|\sec u + \operatorname{tg} u| + k$; (14) $\int \operatorname{cosec} u\,du = \ln|\operatorname{cosec} u - \operatorname{cotg} u| + k$;

(15) $\int \cosh u\,du = \operatorname{senh} u + k$; (16) $\int \operatorname{senh} u\,du = \cosh u + k$; (17) $\int \operatorname{sech}^2 u\,du = \operatorname{tgh} u + k$; (18) $\int \operatorname{cosech}^2 u\,du = -\operatorname{cotgh} u + k$;

(19) $\int \operatorname{sech} u . \operatorname{tgh} u\,du = -\operatorname{sech} u + k$; (20) $\int \operatorname{cosech} u . \operatorname{cotgh} u\,du = -\operatorname{cosech} u + k$;

(21) $\int \frac{du}{\sqrt{a^2 - u^2}} = \operatorname{arcsen}\left(\frac{u}{a}\right) + k, a > 0$; (22) $\int \frac{du}{a^2 + u^2} = \frac{1}{a} \operatorname{arctg}\left(\frac{u}{a}\right), a \neq 0$; (23) $\int \frac{du}{u\sqrt{u^2 - a^2}} = \frac{1}{a} \operatorname{arcsec}\left(\frac{u}{a}\right) + k, a > 0$;

(24) $\int \frac{du}{a^2 - u^2} = \frac{1}{2a} \ln\left|\frac{u+a}{u-a}\right| + k, a \neq 0$; (25) $\int \frac{du}{u^2 - a^2} = \frac{1}{2a} \ln\left|\frac{u-a}{u+a}\right| + k, a \neq 0$;

(26) $\int u\,dv = uv - \int v\,du$; (27) $\int e^{ax} \operatorname{sen}(mx)\,dx = \frac{e^{ax}}{a^2 + m^2}\left[a \operatorname{sen}(mx) - m \cos(mx)\right] + k, \forall a \neq 0$ e $\forall m \neq 0$;

(28) $\int e^{ax} \cos(mx)\,dx = \frac{e^{ax}}{a^2 + m^2}\left[a \cos(mx) - m \operatorname{sen}(mx)\right] + k, \forall a \neq 0$ e $\forall m \neq 0$;

(29) $\int \frac{du}{\sqrt{u^2 + a^2}} = \ln\left(u + \sqrt{u^2 + a^2}\right) + k, a > 0$; (30) $\int \frac{du}{\sqrt{u^2 - a^2}} = \ln\left(u + \sqrt{u^2 - a^2}\right) + k, u > a > 0$;