



## Primitivas Imediatas

( $u: I \rightarrow \mathbb{R}$  é uma função derivável num intervalo  $I$  e  $\mathcal{C}$  denota uma constante real arbitrária)

$$\int a \, dx = ax + \mathcal{C}$$

$$\int \frac{u'}{u} \, dx = \ln |u| + \mathcal{C}$$

$$\int u' \cos u \, dx = \sin u + \mathcal{C}$$

$$\int u' \operatorname{tg} u \, dx = -\ln |\cos u| + \mathcal{C}$$

$$\int \frac{u'}{\cos^2 u} \, dx = \operatorname{tg} u + \mathcal{C}$$

$$\int \frac{u'}{\sqrt{1-u^2}} \, dx = \arcsen u + \mathcal{C}$$

$$\int \frac{u'}{1+u^2} \, dx = \operatorname{arctg} u + \mathcal{C}$$

$$\int u' \operatorname{ch} u \, dx = \operatorname{sh} u + \mathcal{C}$$

$$\int u' \operatorname{th} u \, dx = \ln(\operatorname{ch} u) + \mathcal{C}$$

$$\int \frac{u'}{\operatorname{ch}^2 u} \, dx = \operatorname{th} u + \mathcal{C}$$

$$\int \frac{u'}{\sqrt{u^2+1}} \, dx = \operatorname{argsh} u + \mathcal{C}$$

$$\int \frac{u'}{1-u^2} \, dx = \operatorname{argth} u + \mathcal{C}$$

$$\int u' u^\alpha \, dx = \frac{u^{\alpha+1}}{\alpha+1} + \mathcal{C} \quad (\alpha \neq -1)$$

$$\int u' a^u \, dx = \frac{a^u}{\ln a} + \mathcal{C} \quad (a \in \mathbb{R}^+ \setminus \{1\})$$

$$\int u' \operatorname{sen} u \, dx = -\cos u + \mathcal{C}$$

$$\int u' \operatorname{cotg} u \, dx = \ln |\operatorname{sen} u| + \mathcal{C}$$

$$\int \frac{u'}{\operatorname{sen}^2 u} \, dx = -\operatorname{cotg} u + \mathcal{C}$$

$$\int \frac{-u'}{\sqrt{1-u^2}} \, dx = \arccos u + \mathcal{C}$$

$$\int \frac{-u'}{1+u^2} \, dx = \operatorname{arccotg} u + \mathcal{C}$$

$$\int u' \operatorname{sh} u \, dx = \operatorname{ch} u + \mathcal{C}$$

$$\int u' \operatorname{coth} u \, dx = \ln |\operatorname{sh} u| + \mathcal{C}$$

$$\int \frac{u'}{\operatorname{sh}^2 u} \, dx = -\operatorname{coth} u + \mathcal{C}$$

$$\int \frac{u'}{\sqrt{u^2-1}} \, dx = \operatorname{argch} u + \mathcal{C}$$

$$\int \frac{u'}{1-u^2} \, dx = \operatorname{argcoth} u + \mathcal{C}$$