

Cálculo

Formulário 2

2016'17

Primitivas Imediatas

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

$$\int a \, dx = ax + C$$

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

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

$$\int u' \sec^2 u \, dx = \tan u + C$$

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

$$\int u' \sec u \, dx = \ln |\sec u + \tan u| + C$$

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

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

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

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

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

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

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

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

$$\int u' \sin u \, dx = -\cos u + C$$

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

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

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

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

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

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

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

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

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