



derivadas

$$y = K \quad y' = 0$$

$$y = K \cdot u \quad y' = K \cdot u'$$

$$y = u \pm v \quad y' = u' \pm v'$$

$$y = u \cdot v \quad y' = u' \cdot v + u \cdot v'$$

$$y = \frac{u}{v} \quad y' = \frac{u' \cdot v - u \cdot v'}{v^2}$$

$$y = u^n \quad y' = n \cdot u^{n-1} \cdot u'$$

$$y = \sqrt{u} \quad y' = \frac{1}{2\sqrt{u}} u'$$

$$y = e^u \quad y' = e^u \cdot u'$$

$$y = a^u \quad y' = a^u \cdot \ln a \cdot u'$$

$$y = \ln u \quad y' = \frac{1}{u} u'$$

$$y = \log_a u \quad y' = \frac{\log_a e}{u} \cdot u'$$

$$y = \operatorname{senu} \quad y' = \operatorname{cosu} \cdot u'$$

$$y = \operatorname{cosu} \quad y' = -\operatorname{senu} \cdot u'$$

$$y = \operatorname{tgu} \quad y' = \frac{1}{\cos^2 u} u'$$

$$y = \operatorname{arcsenu} \quad y' = \frac{1}{\sqrt{1-u^2}} u'$$

$$y = \operatorname{arccosu} \quad y' = \frac{-1}{\sqrt{1-u^2}} u'$$

$$y = \operatorname{arctgu} \quad y' = \frac{1}{1+u^2} u'$$

integrales

$$\int K \cdot u \quad = \quad K \int u$$

$$\int u \pm v \quad = \quad \int u \pm \int v$$

$$\int u^n \cdot u' \quad = \quad \frac{u^{n+1}}{n+1} + C \quad n \neq -1$$

$$\int a^u \cdot u' \quad = \quad \frac{a^u}{\ln a} + C$$

$$\int e^u \cdot u' \quad = \quad e^u + C$$

$$\int \frac{1}{u} \cdot u' \quad = \quad \ln|u| + C$$

$$\int \operatorname{cosu} \cdot u' \quad = \quad \operatorname{senu} + C$$

$$\int \operatorname{senu} \cdot u' \quad = \quad -\operatorname{cosu} + C$$

$$\int \frac{1}{\cos^2 u} u' \quad = \quad \operatorname{tgu} + C$$

$$\int \frac{-1}{\operatorname{sen}^2 u} u' \quad = \quad \operatorname{cotgu} + C$$

$$\int \frac{1}{1+u^2} u' \quad = \quad \operatorname{arctgu} + C$$

$$\int \frac{1}{\sqrt{1-u^2}} u' \quad = \quad \operatorname{arcsenu} + C$$

$$\int \operatorname{senhu} \cdot u' \quad = \quad \operatorname{coshu} + C$$

$$\int \operatorname{coshu} \cdot u' \quad = \quad \operatorname{senhu} + C$$

$$\int u \cdot dv \quad = \quad u \cdot v - \int v \cdot du$$