Tabela de Derivadas

Nesta tabela u e v são funções deriváveis de x e c, m e a são constantes.

(1) $y = c \Rightarrow y' = 0$	(19) $y = \operatorname{arcsen} u \Rightarrow y' = \dfrac{u'}{\sqrt{1-u^2}}$
(2) $y = x \Rightarrow y' = 1$	(20) $y = \arccos u \Rightarrow y' = \dfrac{-u'}{\sqrt{1-u^2}}$
(3) $y = c \times u \Rightarrow y' = c \times u'$	(21) $y = \operatorname{arctg} u \Rightarrow y' = \dfrac{u'}{1+u^2}$
(4) $y = u + v \Rightarrow y' = u' + v'$	(22) $y = \operatorname{arccotg} u \Rightarrow y' = \dfrac{-u'}{1+u^2}$
(5) $y = u.v \Rightarrow y' = u.v' + v.u'$	(23) $y = \operatorname{arc\,sec} u \Rightarrow y' = \dfrac{u'}{\lvert u\rvert\sqrt{u^2-1}}$ com $\lvert u\rvert > 1$
(6) $y = \dfrac{u}{v} \Rightarrow y' = \dfrac{v.u' - u.v'}{v^2}$	(24) $y = \operatorname{arccosec} u \Rightarrow y' = \dfrac{-u'}{\lvert u\rvert\sqrt{u^2-1}}$ com $\lvert u\rvert > 1$
(7) $y = u^m, (m \neq 0) \Rightarrow y' = m.u^{m-1}.u'$	(25) $y = \operatorname{senh} u \Rightarrow y' = \cosh u.u'$
(8) $y = au \Rightarrow y' = a^u \ln a.u'$	(26) $y = \cosh u \Rightarrow y' = \operatorname{senh} u.u'$
(9) $y = e^u \Rightarrow y' = e^u.u'$	(27) $y = \operatorname{tgh} u \Rightarrow y' = \operatorname{sech}^2 u.u'$
(10) $y = \log_a u \Rightarrow y' = \dfrac{u'}{u}\log_a e$	(28) $y = \operatorname{cotgh} u \Rightarrow y' = -\operatorname{cosech}^2 u.u'$
(11) $y = \ln u \Rightarrow y' = \dfrac{u'}{u}$	(29) $y = \operatorname{sech} u \Rightarrow y' = -\operatorname{sech} u.\operatorname{tgh} u.u'$
(12) $y = u^v \Rightarrow y' = v.u^{v-1}.u' + u^v.\ln u.v' \ (u > 0)$	(30) $y = \operatorname{cosech} u \Rightarrow y' = -\operatorname{cosech} u.\operatorname{cotgh} u.u'$
(13) $y = \operatorname{sen} u \Rightarrow y' = \cos u.u'$	(31) $y = \operatorname{argsenh} u \Rightarrow y' = \dfrac{u'}{\sqrt{u^2+1}}$
(14) $y = \cos u \Rightarrow y' = -\operatorname{sen} u.u'$	(32) $y = \operatorname{arg\,cosh} u \Rightarrow y' = \dfrac{u'}{\sqrt{u^2-1}}$ com $u > 1$
(15) $y = \operatorname{tg} u \Rightarrow y' = \sec^2 u.u'$	(33) $y = \operatorname{argtgh} u \Rightarrow y' = \dfrac{u'}{1-u^2}$ com $\lvert u\rvert < 1$
(16) $y = \operatorname{cotg} u \Rightarrow y' = -\operatorname{cosec}^2 u.u'$	(34) $y = \operatorname{argcotgh} u \Rightarrow y' = \dfrac{u'}{1-u^2}$ com $\lvert u\rvert > 1$
(17) $y = \sec u \Rightarrow y' = \sec u.\operatorname{tg} u.u'$	(35) $y = \operatorname{arg\,sech} u \Rightarrow y' = \dfrac{-u'}{u\sqrt{1-u^2}}$ com $0 < u < 1$
(18) $y = \operatorname{cosec} u \Rightarrow y' = \operatorname{cosec} u.\operatorname{cotg} u.u'$	(36) $y = \operatorname{argcosech} u \Rightarrow y' = \dfrac{-u'}{u\sqrt{1-u^2}}$ com $u \neq 0$

Tabela de Integrais

Nesta tabela u e v são funções deriváveis de x e c, m e a são constantes.

(1)	$\int du = u + C$	(10)	$\int \operatorname{cosec} u\, du = \ln \lvert \operatorname{cosec} u - \operatorname{cotg} u \rvert + C$
(2)	$\int \frac{du}{u} = \ln \lvert u \rvert + C$	(11)	$\int \sec u\, du = \ln \lvert \sec u + \operatorname{tg} u \rvert + C$
(3)	$\int u^m du = \frac{u^{m+1}}{m+1} + C$ (m é constante $\neq -1$)	(12)	$\int \sec^2 u\, du = \operatorname{tg} u + C$
(4)	$\int a^u du = \frac{a^u}{\ln a} + C$	(13)	$\int \operatorname{cosec}^2 u\, du = -\operatorname{cotg} u + C$
(5)	$\int e^u du = e^u + C$	(14)	$\int \sec u \cdot \operatorname{tg} u\, du = \sec u + C$
(6)	$\int \operatorname{sen} u\, du = -\cos u + C$	(15)	$\int \operatorname{cosec} u \cdot \operatorname{cotg} u\, du = -\operatorname{cosec} u + C$
(7)	$\int \cos u\, du = \operatorname{sen} u + C$	(16)	$\int \frac{du}{\sqrt{a^2 - u^2}} = \operatorname{arcsen} \frac{u}{a} + C$
(8)	$\int \operatorname{tg} u\, du = \ln \lvert \sec u \rvert + C$	(17)	$\int \frac{du}{a^2 + u^2} = \frac{1}{a} \operatorname{arctg} \frac{u}{a} + C$
(9)	$\int \operatorname{cotg} u\, du = \ln \lvert \operatorname{sen} u \rvert + C$		

Fórmulas de Recorrência

(1)	$\int \operatorname{sen}^n u\, du = -\frac{1}{n} \operatorname{sen}^{n-1} u \cdot \cos u + \frac{n-1}{n} \int \operatorname{sen}^{n-2} u\, du$
(2)	$\int \cos^n u\, du = \frac{1}{n} \cos^{n-1} u \cdot \operatorname{sen} u + \frac{n-1}{n} \int \cos^{n-2} u\, du$
(3)	$\int \operatorname{tg}^n u\, du = \frac{1}{n-1} \operatorname{tg}^{n-1} u \cdot \cos u - \int \operatorname{tg}^{n-2} u\, du$
(4)	$\int \operatorname{cotg}^n u\, du = \frac{-1}{n-1} \operatorname{cotg}^{n-1} u - \int \operatorname{cotg}^{n-2} u\, du$
(5)	$\int \sec^n u\, du = \frac{1}{n-1} \sec^{n-2} u \cdot \operatorname{tg} u + \frac{n-2}{n-1} \int \sec^{n-2} u\, du$
(6)	$\int \operatorname{cosec}^n u\, du = \frac{-1}{n-1} \operatorname{cosec}^{n-2} u \cdot \operatorname{cotg} u + \frac{n-2}{n-1} \int \operatorname{cosec}^{n-2} u\, du$

Identidades Trignométricas

(1)	$\operatorname{sen}^2 x + \cos^2 x = 1$
(2)	$1 + \operatorname{tg}^2 x = \sec^2 x$
(3)	$1 + \operatorname{cotg}^2 x = \operatorname{cosec}^2 x$
(4)	$\operatorname{sen}^2 x = \frac{1 - \cos 2x}{2}$
(5)	$\cos^2 x = \frac{1 + \cos 2x}{2}$
(6)	$\operatorname{sen} 2x = 2 \operatorname{sen} x \cdot \cos x$