



1 Derivadas

Função	Derivada	Função	Derivada
u^r	$r u^{r-1} u'$	$\operatorname{tg} u$	$u' \sec^2 u$
$\ln u $	$\frac{u'}{u}$	$\cot g u$	$-u' \operatorname{cosec}^2 u$
e^u	$u' e^u$	$\sec u$	$u' \sec u \operatorname{tg} u$
a^u	$u' a^u \ln a \ (a > 0, a \neq 1)$	$\operatorname{cosec} u$	$-u' \operatorname{cosec} u \cot g u$
$\operatorname{sen} u$	$u' \cos u$	$\arcsen u$	$\frac{u'}{\sqrt{1-u^2}}$
$\cos u$	$-u' \operatorname{sen} u$	$\operatorname{arctg} u$	$\frac{u'}{1+u^2}$
$\operatorname{senh} u$	$u' \cosh u$	$\arccos u$	$-\frac{u'}{\sqrt{1-u^2}}$
$\cosh u$	$u' \operatorname{senh} u$	$\operatorname{arccotg} u$	$-\frac{u'}{1+u^2}$

2 Primitivas

Função	Primitiva	Função	Primitiva
$u^r u'$	$\frac{u^{r+1}}{r+1} \ (r \neq -1)$	$u' \sec^2 u$	$\operatorname{tg} u$
$\frac{u'}{u}$	$\ln u $	$u' \operatorname{cosec}^2 u$	$-\cot g u$
$u' e^u$	e^u	$u' \sec u \operatorname{tg} u$	$\sec u$
$u' a^u$	$\frac{a^u}{\ln a} \ (a > 0, a \neq 1)$	$u' \operatorname{cosec} u \cot g u$	$-\operatorname{cosec} u$
$u' \cos u$	$\operatorname{sen} u$	$\frac{u'}{\sqrt{1-u^2}}$	$\arcsen u$
$u' \operatorname{sen} u$	$-\cos u$	$\frac{u'}{1+u^2}$	$\operatorname{arctg} u$
$u' \cosh u$	$\operatorname{senh} u$	$u' \sec u$	$\ln \sec u + \operatorname{tg} u $
$u' \operatorname{senh} u$	$\cosh u$	$u' \operatorname{cosec} u$	$-\ln \operatorname{cosec} u + \cot g u $

3 Primitivas quase imediatas: exercícios

- a) $\int x(1+x^2)^9 dx$ b) $\int \operatorname{sen} x \cos^5 x dx$ c) $\int \frac{x^5}{1+x^6} dx$ d) $\int \operatorname{tg} x dx$
 e) $\int \frac{1}{1+4x^2} dx$ f) $\int e^{\operatorname{tg} x} \sec^2 x dx$ g) $\int x 7^{x^2} dx$ h) $\int \operatorname{tg}^2 x dx$
 i) $\int \frac{x}{x^2+9} dx$ j) $\int \frac{1}{x^2+9} dx$ k) $\int \frac{1}{(x+9)^2} dx$ l) $\int \frac{x^2}{x^2+9} dx$
 m) $\int x^3 \sqrt{1-x^4} dx$ n) $\int \frac{x^3}{\sqrt{1-x^4}} dx$ o) $\int \frac{3x}{\sqrt{1-x^4}} dx$ p) $\int \frac{e^x}{1+e^{2x}} dx$
 q) $\int \frac{\ln x}{x} dx$ r) $\int \frac{5}{x \ln^3 x} dx$ s) $\int \frac{1}{x \ln x} dx$ t) $\int \frac{e^x}{1+e^x} dx$
 u) $\int \operatorname{sen}^3 x \cos^5 x dx$ v) $\int \frac{1}{\sec x - \cos x} dx$ w) $\int \frac{1}{\sqrt{x-x^2}} dx$ x) $\int \frac{1}{1+e^x} dx$