




Find The Derivative



$$\frac{d}{dx} \left(a^x \right) =$$



$a^x \ln a$



$$\frac{d}{dx} \left(\sin^{-1} x \right) =$$



1

$$\sqrt{1 - x^2}$$



$$\frac{d}{dx} (\ln x) =$$



1



x




$$\lim_{x \rightarrow \infty} \frac{\sin \theta}{\theta} =$$



1




$$\frac{d}{dx} (\log_a x) =$$



1


$x \ln a$



$$\frac{d}{dx} (\sec x) =$$



$\sec x \tan x$



$$\frac{d}{dx} (\csc x) =$$




— $\csc x \cot x$



$$\frac{d}{dx} (\tan x) =$$




$\sec^2 x$


$$\frac{d}{dx} \left(\csc^{-1} x \right) =$$



1


$x\sqrt{x^2 - 1}$



$$\lim_{x \rightarrow \infty} \frac{\cos \theta - 1}{\theta} =$$



O



$$\frac{d}{dx} (\sin x) =$$




cos *x*



$$\frac{d}{dx} (c) =$$



O




$$\frac{d}{dx} \left(\cos^{-1} x \right) =$$



1


$\sqrt{1 - x^2}$



$$\frac{d}{dx} f(g(x)) =$$




$$f'(g(x)) \cdot g'(x)$$



$$\frac{d}{dx} (\cos x) =$$




— *sin x*



$$\frac{d}{dx} \left(e^x \right) =$$



e^x



$$\frac{d}{dx} \left(\tan^{-1} x \right) =$$




1

1 + x^2



$$\frac{d}{dx} \left(\sec^{-1} x \right) =$$



1


$x \sqrt{x^2 - 1}$



$$\frac{d}{dx} (\cot x) =$$



— csc² x



$$\frac{d}{dx} \left(x^n \right) =$$



*n*x *n* - 1



$$\frac{d}{dx} \left(\cot^{-1} x \right) =$$



$$\frac{1}{1 + x^2}$$



$$(fg)' =$$



$$fg' + gf'$$




(cf) ! =



c f !



$$\left(\frac{f}{g} \right)' =$$




$$gf' - fg'$$

$$g^2$$



$$(f + g)' =$$



f' + *g*'



$$(f - g)' =$$



f ' — *g* ' !