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$\int x^n dx = x^{(n+1)} / (n+1) + C$ ( $n \neq -1$ ) <a href="#">Proof</a>	$\int 1/x dx = \ln x  + C$
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**Exponential / Logarithmic**

$\int e^x dx = e^x + C$ <a href="#">Proof</a>	$\int b^x dx = b^x / \ln(b) + C$ <a href="#">Proof</a> , <a href="#">Tip!</a>
$\int \ln(x) dx = x \ln(x) - x + C$ <a href="#">Proof</a>	

**Trigonometric**

$\int \sin x dx = -\cos x + C$ <a href="#">Proof</a>	$\int \csc x dx = -\ln \csc x + \cot x  + C$ <a href="#">Proof</a>
$\int \cos x dx = \sin x + C$ <a href="#">Proof</a>	$\int \sec x dx = \ln \sec x + \tan x  + C$ <a href="#">Proof</a>
$\int \tan x dx = -\ln \cos x  + C$ <a href="#">Proof</a>	$\int \cot x dx = \ln \sin x  + C$ <a href="#">Proof</a>

**Trigonometric Result**

$\int \cos x dx = \sin x + C$ <a href="#">Proof</a>	$\int \csc x \cot x dx = -\csc x + C$ <a href="#">Proof</a>
$\int \sin x dx = -\cos x + C$ <a href="#">Proof</a>	$\int \sec x \tan x dx = \sec x + C$ <a href="#">Proof</a>
$\int \sec^2 x dx = \tan x + C$ <a href="#">Proof</a>	$\int \csc^2 x dx = -\cot x + C$ <a href="#">Proof</a>

**Inverse Trigonometric**

$\int \arcsin x dx = x \arcsin x + \sqrt{1-x^2} + C$
$\int \operatorname{arccsc} x dx = x \operatorname{arccsc} x - \sqrt{1-x^2} + C$
$\int \arctan x dx = x \arctan x - (1/2) \ln(1+x^2) + C$

## Inverse Trigonometric Result

$\int \frac{dx}{\sqrt{1-x^2}} = \arcsin x + C$	<b>Useful Identities</b> $\arccos x = \pi/2 - \arcsin x$ $(-1 \leq x \leq 1)$ $\operatorname{arccsc} x = \pi/2 - \operatorname{arcsec} x$ $( x  \geq 1)$ $\operatorname{arccot} x = \pi/2 - \arctan x$ $(\text{for all } x)$
$\int \frac{dx}{x\sqrt{x^2-1}} = \operatorname{arcsec} x  + C$	
$\int \frac{dx}{1+x^2} = \arctan x + C$	

## Hyperbolic

$\int \sinh x \, dx = \cosh x + C$ <a href="#">Proof</a>	$\int \operatorname{csch} x \, dx = \ln  \tanh(x/2)  + C$ <a href="#">Proof</a>
$\int \cosh x \, dx = \sinh x + C$ <a href="#">Proof</a>	$\int \operatorname{sech} x \, dx = \arctan (\sinh x) + C$
$\int \tanh x \, dx = \ln (\cosh x) + C$ <a href="#">Proof</a>	$\int \operatorname{coth} x \, dx = \ln  \sinh x  + C$ <a href="#">Proof</a>

Click on **Proof** for a proof/discussion of a theorem.

To solve a more complicated integral, see [The Integrator](http://integrals.wolfram.com/) at <http://integrals.wolfram.com/>

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