

MATHEMTAICAL TABLES

$\int \frac{(\cos x dx)}{(\sqrt{(a^2 - b^2 \cos^2 x)})} = \frac{1}{b} \ln (b \sin x + \sqrt{(a^2 - b^2 \cos^2 x)}) + k$
$\int \cos x \sqrt{(a^2 + b^2 \cos^2 x)} dx = \frac{\sin x}{2} \sqrt{(a^2 + b^2 \cos^2 x)} + \frac{(a^2 + b^2)}{2b} \sin^{-1} \frac{(b \sin x)}{(\sqrt{(a^2 + b^2)})} + k$
$\int \frac{(\cos 2x)}{(\cos x)} dx = 2 \sin x - \ln (\tan (\frac{\pi}{4} + \frac{x}{2})) + c$
$\int \frac{(\cos 2x)}{(\cos x)} dx = 2 \sin x - \ln (\tan (\frac{\pi}{4} + \frac{x}{2})) + c$
$\int \frac{(\cos 2x)}{(\cos^2 x)} dx = 2x - \tan x + c$
$\int \frac{(\cos 2x)}{(\cos^3 x)} dx = \frac{-(\sin x)}{(2 \cos^2 x)} + \frac{3}{2} \ln (\tan (\frac{\pi}{4} + \frac{x}{2})) + c$
$\int \frac{(\cos 2x)}{(\cos^n x)} dx = \frac{-(\sin x)}{((n-1) \cos^{n-1} x)} + \frac{n}{(n-1)} \int \frac{dx}{(\cos^{(n-2)} x)}$
$\int \frac{(\cos^2 x)}{(\cos 2x)} dx = \frac{x}{2} - \frac{1}{4} \ln (\frac{(1 - \tan x)}{(1 + \tan x)}) + c$
$\int \frac{(\cos^3 x)}{(\cos 2x)} dx = \frac{1}{2} \sin x + \frac{1}{(4\sqrt{2})} \ln (\frac{(1 - \sqrt{2}) \sin x}{(1 + \sqrt{2}) \sin x}) + c$
$\int \frac{(\cos^n x)}{(\cos 2x)} dx = \frac{1}{2} \int \cos^{(n-2)} x dx + \frac{1}{2} \int \frac{(\cos^{(n-2)} x)}{(\cos 2x)} dx$
$\int \frac{(\cos 3x)}{(\cos x)} dx = \sin 2x - x + c$
$\int \frac{(\cos 3x)}{(\cos^2 x)} dx = 4 \sin x - 3 \ln (\tan (\frac{\pi}{4} + \frac{x}{2})) + c$
$\int \frac{(\cos 3x)}{(\cos^3 x)} dx = 4x - 3 \tan x + c$
$\int \frac{(\cos 3x)}{(\cos^n x)} dx = 4 \int \frac{dx}{(\cos^{(n-3)} x)} - 3 \int \frac{dx}{(\cos^{(n-1)} x)}$

Integrals Containing Sin & Cos Function