Tabela de Integrais

INTEGRAIS

0) $\int du = u + c$

1) $\int u^p du = \frac{u^{p+1}}{p+1} + k \ , \ p \neq -1$

2) $\int \frac{du}{u} = \ln| u | + k$

3) $\int e^u du = e^u + k$

4) $\int \text{sen}(u) du = -\cos(u) + k$

5) $\int \cos(u) du = \text{sen}(u) + k$

6) $\int \sec^2(u) du = \text{tg}(u) + k$

7) $\int \csc^2(u) du = -\text{cotg}(u) + k$

8) $\int \sec(u)\,\text{tg}(u) du = \sec(u) + k$

9) $\int \csc(u)\,\text{cotg}(u) du = -\csc(u) + k$

10) $\int \frac{du}{\sqrt{a^2 - u^2}} = \text{arcsen}\left(\frac{u}{a}\right) + k$

11) $\int \frac{du}{a^2 + u^2} = \frac{1}{a}\text{arctg}\left(\frac{u}{a}\right) + k$

12) $\int \frac{du}{u\sqrt{u^2 - a^2}} = \frac{1}{a}\text{arcsec}\left(\frac{u}{a}\right) + k$

13) $\int \sec(u) du = \ln| \sec(u) + \text{tg}(u) | + k$

14) $\int \csc(u) du = -\ln| \csc(u) + \text{cotg}(u) | + k$

15) $\int \sec^3 u du = \frac{\sec(u)\,\text{tg}(u) + \ln(\sec(u) + \text{tg}(u))}{2} + k$

16) $\int \ln(u) du = u\ln(u) - u + k$

FÓRMULAS TRIGONOMÉTRICAS

$\text{sen}^2 x + \cos^2 x = 1$

$\sec^2 x = 1 + \text{tg}^2 x$

$\text{cossec}^2 x = 1 + \text{cotg}^2 x$

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

$\text{sen}^2 x = \frac{1 - \cos 2x}{2}$

$\text{sen}2x = 2\,\text{sen}x\,\cos x$

$\cos 2x = \cos^2 x - \text{sen}^2 x$

$\text{tg}\,x = \frac{\text{sen}x}{\cos x}$

$\text{cotg}\,x = \frac{\cos x}{\text{sen}x}$

$\sec x = \frac{1}{\cos x}$

$\text{cscx} = \frac{1}{\text{sen}x}$

$\text{sen}(A \pm B) = \text{sen}A\,\cos B \pm \cos A\,\text{sen}B$

$\cos(A \pm B) = \cos A\,\cos B \mp \text{sen}\,A\,\text{sen}\,B$

$\text{sen}A\cos B = \frac{\text{sen}(A - B) + \text{sen}(A + B)}{2}$

$\text{sen}A\text{sen}B = \frac{\cos(A - B) - \cos(A + B)}{2}$

$\cos A\cos B = \frac{\cos(A - B) + \cos(A + B)}{2}$