CALCULO A.P.

TABLA DE INTEGRALES

$\int dx = x+C$

$\int (du+dv-dw) = u+v-w+C$

$\int a\,dv = a\int dv$

$\int v^n dv = \frac{v^{n+1}}{n+1}+C \quad (n\neq -1)$

$\int \frac{dv}{v} = \mathrm{Ln}\,|v| +C$

$\int a^v dv = \frac{a^v}{\mathrm{Lna}}+C$

$\int e^v dv = e^v+C$

$\int \mathrm{sen}v\, dv = -\cos v +C$

$\int \cos v\, dv = \mathrm{sen}v +C$

$\int \mathrm{tg}v\, dv = \mathrm{Ln}\,|\sec v| +C$

$\int \mathrm{ctg}v\, dv = \mathrm{Ln}\,|\mathrm{sen}v| +C$

$\int \sec v\, dv = \mathrm{Ln}\,|\sec v+\mathrm{tg}v| +C$

$\int \csc v\, dv = \mathrm{Ln}\,|\csc v-\mathrm{ctg}v| +C$

$\int \sec^2 v\, dv = \mathrm{tg}v +C$

$\int \csc^2 v\, dv = -\mathrm{ctg}v +C$

$\int \sec v\, \mathrm{t}v\, dv = \sec v +C$

$\int \csc v\, \mathrm{ctg}v\, dv = -\csc v +C$

$\int \frac{dv}{\sqrt{a^2-v^2}} = \arcsin\frac{v}{a}+C$

$\int \frac{dv}{v^2+a^2} = \frac{1}{a}\,\mathrm{arctg}\frac{v}{a}+C$

$\int \frac{dv}{v^2-a^2} = \frac{1}{2a}\mathrm{Ln}\left|\frac{v-a}{v+a}\right|+C$

$\int \frac{dv}{a^2-v^2} = \frac{1}{2a}\mathrm{Ln}\left|\frac{a+v}{a-v}\right|+C$

$\int \frac{dv}{v\sqrt{v^2+a^2}} = \frac{1}{a}\,\mathrm{arcsec}\frac{v}{a}+C$

$\int \frac{dv}{\sqrt{v^2\pm a^2}} = \mathrm{Ln}(v+\sqrt{v^2\pm a^2})+C$

$\int \mathrm{senh}\, v\, dv = \cosh v +C$

$\int \cosh v\, dv = \mathrm{senh}\, v +C$

$\int \mathrm{tgh}\, v\, dv = \mathrm{Ln}\cosh v +C$

$\int \mathrm{ctgh}\, v\, dv = \mathrm{Ln}\,|\mathrm{senh}\, v| +C$

$\int \mathrm{sech}^2 v\, dv = \mathrm{tgh}\, v +C$

$\int \mathrm{csch}^2 v\, dv = -\mathrm{ctgh}\, v +C$

$\int \mathrm{sech}\, v\, \mathrm{tgh}\, v\, dv = -\mathrm{sech}\, v +C$

$\int \mathrm{csch}\, v\, \mathrm{ctgh}\, v\, dv = -\mathrm{csch}\, v +C$

$\int \frac{dv}{\sqrt{v^2+a^2}} = \mathrm{senh}^{-1}\frac{v}{a}+C$

$\int \frac{dv}{\sqrt{v^2-a^2}} = \mathrm{csch}^{-1}\frac{v}{a}+C \qquad v > a > 0$

$\int \frac{dv}{a^2-v^2} = \frac{1}{a}\,\mathrm{tgh}^{-1}\frac{v}{a}+C \qquad v^2 < a^2$

$\int \frac{dv}{v^2-a^2} = -\frac{1}{a}\,\mathrm{ctgh}^{-1}\frac{v}{a}+C \qquad v^2 > a^2$

$\int \sqrt{a^2-v^2}\, dv = \frac{v}{2}\sqrt{a^2-v^2}+\frac{a^2}{2}\arcsin\frac{v}{a}+C$

$\int \sqrt{v^2\pm a^2}\, dv = \frac{v}{2}\sqrt{v^2\pm a^2}\pm\frac{a^2}{2}\mathrm{Ln}(v+\sqrt{v^2\pm a^2})+C$

$\int \arcsin v\, dv = v\arcsin v+\sqrt{1-v^2}+C$

$\int \arccos v\, dv = v\arccos v-\sqrt{1-v^2}+C$

$\int \mathrm{arctg}v\, dv = v\,\mathrm{arctg}v-\mathrm{Ln}\sqrt{1+v^2}+C$

$\int \mathrm{arcctg}v\, dv = v\,\mathrm{arcctg}v+\mathrm{Ln}\sqrt{1+v^2}+C$

$\int \mathrm{arcsec}v\, dv = v\,\mathrm{arcsec}v-\cosh^{-1}v+C$

$\int \mathrm{arccsc}v\, dv = v\,\mathrm{arccsc}v+\cosh^{-1}v+C$

$\int \mathrm{sen}^2 v\, dv = \frac{1}{2}v-\frac{1}{4}\mathrm{sen}2v+C$

$\int \cos^2 v\, dv = \frac{1}{2}v-\frac{1}{4}\mathrm{sen}2v+C$

$\int \cos^n v\,\mathrm{sen}v\, dv = -\frac{\cos^{n+1}v}{n+1}+C$

$\int \mathrm{sen}^n v\cos v\, dv = \frac{\mathrm{sen}^{n+1}v}{n+1}+C$

$\int v\,\mathrm{sen}v\, dv = \mathrm{sen}v-v\cos v+C$

$\int v\cos v\, dv = \cos v+v\,\mathrm{sen}v+C$

$\int e^{av} dv = \frac{e^{av}}{a}+C$

$\int b^{av} dv = \frac{b^{av}}{a\,\mathrm{Lnb}}+C$

$\int v e^{av} dv = \frac{e^{av}}{a^2}(av-1)+C$

$\int v^n e^{av} dv = \frac{v^n e^{av}}{a}-\frac{n}{a}\int v^{n-1}e^{av}dv$

$\int v^n b^{av} dv = \frac{v^n b^{av}}{a\,\mathrm{Lnb}}-\frac{n}{a\,\mathrm{Lnb}}\int u^{n-}1b^{av}dv+C$

$\int \frac{b^{av}dv}{v^n} = -\frac{b^{av}}{(n-1)v^{n-1}}+\frac{a\,\mathrm{Lnb}}{n-1}\int\frac{b^{av}dv}{v^{n-1}}$

$\int \mathrm{Lnv}\, dv = v\,\mathrm{Lnv}-v+C$

$\int v^n \mathrm{Lnv}\, dv = v^{n+1}\left[\frac{\mathrm{Lnv}}{n+1}-\frac{1}{(n+1)^2}\right]+C$

$\int e^{av}\mathrm{Lnv}\, dv = \frac{e^{av}\mathrm{Lnv}}{a}-\frac{1}{a}\int\frac{e^{av}}{v}dv$

$\int \frac{dv}{v\,\mathrm{Lnv}} = \mathrm{Ln}(\mathrm{Lnv})+C$

$\int_a^b f(x)\,dx = F(x)\Big]_a^b = F(b)-F(a)$

$\int \mathrm{sen}mv\,\mathrm{sen}nv\, dv = -\frac{\mathrm{sen}(m+n)v}{2(m+n)}+\frac{\mathrm{sen}(m-n)v}{2(m-n)}+C$

$\int \mathrm{sen}mv\cos nv\, dv = -\frac{\cos(m+n)v}{2(m+n)}-\frac{\cos(m-n)v}{2(m-n)}+C$

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