Cuadro de integrales inmediatas

$\int dx = x + c$	$\int u'\,dx = u + c$
$\int u'\,u^n dx = \frac{u^{n+1}}{n+1} + c$	$\int \frac{u'}{u} dx = Lu + c$
$\int u'\,e^u dx = e^u + c$	$\int u'\,a^n dx = \frac{a^n}{La} + c$
$\int u'\ \operatorname{sen}(u)dx = -\cos(u) + c$	$\int u'\ \cos(u)dx = \operatorname{sen}(u) + c$
$\int \frac{u'dx}{\cos^2 u} = \int u'(1 + \operatorname{tg}^2(u))dx = \operatorname{tg}(u) + c$	$\int \frac{u'\,dx}{\sqrt{1-u^2}} = \operatorname{arcsen}(u) + c$
$\int \frac{u'dx}{\operatorname{sen}^2 u} = \int u'(1+\cot g^2(u))dx = -\cot g(u) + c$	$\int \frac{u'\,dx}{1+u^2} = \operatorname{arctg}(u) + c$
$\int u'\,sh(u) = ch(u) + c$	$\int u'\,ch(u) = sh(u) + c$
$\int \frac{u'\,dx}{\sqrt{1+u^2}} = \arg sh(u) + c$	$\int \frac{u'\,dx}{\sqrt{u^2-1}} = \arg ch(u) + c$
$\int \frac{u'\,dx}{1-u^2} = \arg th(u) + c$	

Sustituciones recomendadas		
Función	Cambio	Cálculos
$\int R(x, e^x)dx$	$e^x = t$	x = L t ; $dx = \frac{dt}{t}$
$\int R(x, Lx)dx$	Lx = t	$x = e^t$; $dx = e^t\,dt$
$\int R(x, \operatorname{arctg}(x))dx$	arctg(x) = t	x = tg(t) ; $dx = \frac{dt}{\cos^2 x}$
$\int R(x, \operatorname{arcsen}(x))dx$	arcsen(x) = t	x = sen(t) ; dx = cos(t) dt
$\int R(x, \arccos(x))dx$	arccos(x) = t	x = cos(t) ; dx = -sen(t) dt
$\int R(x, \arg th(x))dx$	argth(x) = t	x = th(t) ; $dx = \frac{dt}{ch^2 x}$
$\int R(x, \arg sh(x))dx$	argsh(x) = t	x = sh(t) ; dx = ch(t) dt
$\int R(x, \arg ch(x))dx$	argch(x) = t	x = ch(t) ; dx = sh(t) dt
Sustituciones en integrales de funciones trigonométricas circulares		
Si es impar en SEN X	cos x = t	x = arccos(t); $dx = \frac{-dt}{\sqrt{1-t^2}}$; $\operatorname{sen}(x) = \sqrt{1-t^2}$

Si es impar en COS X	sen x = t	x = arcsen(t); $dx = \frac{dt}{\sqrt{1-t^2}}$; $\cos(x) = \sqrt{1-t^2}$
Si es par en SEN y en COS	tg x = t	x = arctg(t) ; $dx = \frac{dt}{1+t^2}$; $\cos(x) = \frac{1}{\sqrt{1+t^2}}$ $\operatorname{sen}(x) = \frac{t}{\sqrt{1+t^2}}$
Si no es ninguno de los casos anteriores : CAMBIO GENERAL	$\operatorname{tg}\frac{x}{2} = t$	x = 2 arctg(t) ; $dx = \frac{2dt}{1+t^2}$; $\operatorname{sen}(x) = \frac{2t}{1+t^2}$; $\cos(x) = \frac{1-t^2}{1+t^2}$
Sustituciones en integrales de funciones hiperbólicas		
Si es impar en SH X	ch x = t	x = argch(t); $dx = \frac{dt}{\sqrt{t^2-1}}$; $sh(x) = \sqrt{t^2-1}$
Si es impar en CH X	sh x = t	x = argsh(t); $dx = \frac{dt}{\sqrt{1+t^2}}$; $ch(x) = \sqrt{t^2+1}$
Si es par en SH y en CH	th x = t	x = argch(t) ; $dx = \frac{dt}{1+t^2}$; $\operatorname{sen}(x) = \cos(x) = \frac{1}{\sqrt{1-t^2}}$
Si no es ninguno de los casos anteriores : CAMBIO GENERAL	$th\frac{x}{2} = t$	x = 2 argth(t) ; $dx = \frac{2dt}{1-t^2}$; $sh(x) = \frac{2t}{1-t^2}$; $\cos(x) = \frac{1+t^2}{1-t^2}$

Formula de integración por partes

∫ u·dv = u·v-∫v·du