

Table d'intégrales

$e^{\pm jx} = \cos(x) \pm j\sin(x)$	$\tan(x \pm y) = \frac{\tan(x) \pm \tan(y)}{1 \mp \tan(x)\tan(y)}$
$\cos(x) = \frac{1}{2}[e^{jx} + e^{-jx}]$	$\sin(x) = \frac{1}{2j}[e^{jx} - e^{-jx}]$
$\cos(x \pm \frac{\pi}{2}) = \mp \sin(x)$	$\sin(x \pm \frac{\pi}{2}) = \pm \cos(x)$
$2\sin(x)\cos(x) = \sin(2x)$	$\sin^2(x) + \cos^2(x) = 1$
$\cos^2(x) - \sin^2(x) = \cos(2x)$	$\cos^2(x) = \frac{1}{2}(1 + \cos(2x))$
$\cos^2(x) = \frac{1}{2}(1 + \cos(2x))$	$\sin^2(x) = \frac{1}{2}(1 - \cos(2x))$
$\cos^3(x) = \frac{1}{4}(3\cos(x) + \cos(3x))$	$\sin^3(x) = \frac{1}{4}(3\sin(x) - \sin(3x))$
$\sin(x \pm y) = \sin(x)\cos(y) \pm \cos(x)\sin(y)$	$\cos(x \pm y) = \cos(x)\cos(y) \mp \sin(x)\sin(y)$
$\sin(x)\sin(y) = \frac{1}{2}[\cos(x-y) - \cos(x+y)]$	$\cos(x)\cos(y) = \frac{1}{2}[\cos(x-y) + \cos(x+y)]$
$\sin(x)\cos(y) = \frac{1}{2}[\sin(x-y) + \sin(x+y)]$	$a\cos(x) + b\sin(x) = C\cos(x + \theta)$ $C = \sqrt{a^2 + b^2}, \theta = \tan^{-1}\left(\frac{-b}{a}\right)$
$\int u dv = uv - \int v du$	$\int f(x)g'(x)dx = f(x)g(x) - \int f'(x)g(x)dx$
$\int \sin(ax)dx = -\frac{1}{a}\cos(ax)$	$\int \cos(ax)dx = \frac{1}{a}\sin(ax)$
$\int \sin^2(ax)dx = \frac{x}{2} - \frac{\sin(2ax)}{4a}$	$\int \cos^2(ax)dx = \frac{x}{2} + \frac{\sin(2ax)}{4a}$
$\int x\sin(ax)dx = \frac{1}{a^2}(\sin(ax) - ax\cos(ax))$	$\int x\cos(ax)dx = \frac{1}{a^2}(\cos(ax) + ax\sin(ax))$
$\int x^2\sin(ax)dx = \frac{1}{a^3}(2ax\sin(ax) + 2\cos(ax) - a^2x^2\cos(ax))$	
$\int x^2\cos(ax)dx = \frac{1}{a^3}(2ax\cos(ax) - 2\sin(ax) + a^2x^2\sin(ax))$	
$\int \sin(ax)\sin(bx)dx = \frac{\sin((a-b)x)}{2(a-b)} - \frac{\sin((a+b)x)}{2(a+b)} \quad a^2 \neq b^2$	
$\int \sin(ax)\cos(bx)dx = -\left[\frac{\cos((a-b)x)}{2(a-b)} + \frac{\cos((a+b)x)}{2(a+b)}\right] \quad a^2 \neq b^2$	
$\int \cos(ax)\cos(bx)dx = \frac{\sin((a-b)x)}{2(a-b)} + \frac{\sin((a+b)x)}{2(a+b)} \quad a^2 \neq b^2$	
$\int e^{ax}dx = \frac{1}{a}e^{ax}$	$\int \frac{1}{x^2 + a^2}dx = \frac{1}{a}\tan^{-1}\left(\frac{x}{a}\right)$
$\int xe^{ax}dx = \frac{e^{ax}}{a^2}(ax - 1)$	$\int x^2e^{ax}dx = \frac{e^{ax}}{a^3}(a^2x^2 - 2ax + 2)$
$\int e^{ax}\sin(bx)dx = \frac{e^{ax}}{a^2 + b^2}(a\sin(bx) - b\cos(bx))$	$\int e^{ax}\cos(bx)dx = \frac{e^{ax}}{a^2 + b^2}(a\cos(bx) + b\sin(bx))$
$\int \frac{x}{x^2 + a^2}dx = \frac{1}{2}\ln(x^2 + a^2)$	