

$\int x^{\alpha} dx = \frac{x^{\alpha+1}}{\alpha+1} + C \quad \alpha \in \mathbb{Q}$	$\int \operatorname{sen} x dx = -\cos x + C$
$\int \sqrt{x} dx = \frac{2}{3} x^{1/2} + C$	$\int \cos x dx = \operatorname{sen} x + C$
$\int \frac{dx}{x^2 - a^2} = \frac{1}{2a} \operatorname{log} \left \frac{x-a}{x+a} \right + C$	$\int \frac{1}{\cos^2 x} dx = \operatorname{Tg} x + C$
$\int \sqrt{a^2 - x^2} dx = \frac{1}{2} \left(a^2 \arccos \frac{x}{a} + x \sqrt{a^2 - x^2} \right)$	$\int \frac{1}{\operatorname{sen}^2 x} dx = -\operatorname{cotg} x + C$
$\int \frac{dx}{\sqrt{a^2 - x^2}} = \arccos \frac{x}{a} + C$	$\int_0^{\frac{\pi}{2}} \cos^{2k} x dx = \frac{2k-1}{2k} \int_0^{\frac{\pi}{2}} \cos^{2(k-1)} x dx$
$\int \frac{1}{x} dx = \operatorname{log} x + C$	$\int \operatorname{sen} [f(x)] f'(x) dx = -\cos [f(x)] + C$
$\int \frac{a^2}{(x^2 + a^2)^{\frac{3}{2}}} dx = \frac{x}{\sqrt{a^2 + x^2}} + C$	$\int \cos [f(x)] f'(x) dx = \operatorname{sen} [f(x)] + C$
$\int \frac{x}{x+1} dx = x - \operatorname{log} x+1 + C$	$\int \frac{f'(x)}{\cos^2 [f(x)]} dx = \operatorname{Tg} [f(x)] + C$
$\int \frac{dx}{x(x+2)} = \frac{1}{2} \operatorname{log} \left \frac{x}{x+2} \right + C$	$\int \frac{f'(x)}{\operatorname{sen}^2 [f(x)]} dx = -\operatorname{cotg} [f(x)] + C$
$\int \frac{dx}{x^2-1} = \frac{1}{2} \operatorname{ln} \left \frac{x-1}{x+1} \right + C$	$\int \operatorname{sen}^2 \alpha x dx = \frac{1}{2} \left(x - \frac{1}{2} \operatorname{sen} 2\alpha x \right) + C$
$\int \frac{dx}{x(x \pm 1)} = \pm \operatorname{log} \left \frac{x}{x \pm 1} \right + C$	$\int \cos^2 \alpha x dx = \frac{1}{2} \left(x + \frac{1}{2} \operatorname{sen} 2\alpha x \right) + C$
$\int \frac{1}{1+x^2} dx = \operatorname{arctg} x + C$	$\int \operatorname{sen}^3 x dx = \frac{1}{3} \cos^3 x - \cos x + C$
$\int \frac{1}{\sqrt{1-x^2}} dx = \arcsen x + C$	$\int \cos^3 x dx = \operatorname{sen} x \left(1 - \frac{1}{3} \operatorname{sen}^2 x \right) + C$
$\int \operatorname{Tg} x dx = -\operatorname{log} \cos x + C$	$\int \operatorname{cotg} x dx = \operatorname{log} \operatorname{sen} x + C$
$\int_0^{\frac{\pi}{2}} \sqrt{1 - k^2 \operatorname{sen}^2 t} dt = \frac{\pi}{2} \left[1 - \sum_{n=1}^{\infty} \frac{1}{(2n-1)!!} \left(\frac{1 \cdot 3 \cdot 5 \cdots (2n-1)}{2 \cdot 4 \cdot 6 \cdots 2n} k^n \right)^2 \right]$	

$\int x \sin x dx = \sin x - x \cos x + C$	$\int e^{2nx} dx = \frac{1}{2} x e^{2nx} + C$
$\int x \cos x dx = x \sin x + \cos x + C$	
$\int [f(x)]^{\alpha} f'(x) dx = \frac{[f(x)]^{\alpha+1}}{\alpha+1} + C$	$\int \log(x+Q) dx = (x+Q) \log(x+Q) - x + C$
$\int \frac{f'(x)}{f(x)} dx = \log f(x) + C$	$\int \sin x \cos x dx = \frac{\sin^2 x}{2} + C = -\frac{\cos^2 x}{2} + C$
$\int \frac{f'(x)}{1+[f(x)]^2} dx = \arctan[f(x)] + C$	$\int e^{-x^2} x^3 dx = -\frac{1}{2} e^{-x^2} (1+x^2) + C$
$\int \frac{f'(x)}{\sqrt{1-[f(x)]^2}} dx = \arcsin[f(x)] + C$	$\int \frac{x}{\sqrt{Q-x}} dx = -2x\sqrt{Q-x} + \frac{4}{3}(Q-x)^{\frac{3}{2}} + C$
$\int f(x) g'(x) dx = f(x) g(x) - \int f'(x) g(x) dx$	$\int x \log(1+x^2) dx = \frac{1}{2} [(1+x^2) \log(1+x^2) - x^2] + C$
$\int e^{\pm x} dx = \pm e^{\pm x} + C$	$\int \sqrt{1+x^2} dx = \frac{1}{2} \left[x \sqrt{1+x^2} - \log(x + \sqrt{1+x^2}) \right] + C$
$\int a^x dx = \frac{a^x}{\log a} + C = \log_a e \cdot Q^x + C$	$\int \frac{dx}{\sqrt{1+x^2}} = \log(x + \sqrt{1+x^2}) + C$
$\int x e^x dx = \pm e^x (x-1) + C$	$\int \frac{dx}{\sin x} = \frac{1}{2} \log \frac{1-\cos x}{1+\cos x} + C$
$\int e^{fx} \cdot f'(x) dx = e^{fx} + C$	$\int \frac{dx}{\cos x} = -\frac{1}{2} \log \frac{1-\sin x}{1+\sin x} + C$
$\int Q^x \cdot f'(x) dx = \frac{Q^x f(x)}{\log Q} + C$	$\int \frac{dx}{\sin x + \cos x} = \frac{\sqrt{2}}{2} \left(\log \left \frac{e^{\frac{x}{2}} - 1 + \sqrt{2}}{e^{\frac{x}{2}} - 1 - \sqrt{2}} \right \right) + C$
$\int \log x dx = x(\log x - 1) + C$	$\int x \log(e+x^2) dx = \frac{1}{2} (\log(x^2+Q) - x^2) + C$
$\int x \log(a+x) dx = \frac{1}{2} (\log(a+x)(x^2-Q) - \frac{x^2}{2} + ax)$	$\int \frac{dx}{1+e^x} = \log \left(\frac{e^x}{1+e^x} \right) + C$
$\int x \log x dx = \frac{x^2}{2} \left(\log x - \frac{1}{2} \right) + C$	$\int \arctan x dx = x \arctan x - \frac{1}{2} \log(1+x^2) + C$
	$\int \arcsin x dx = x \arcsin x + \sqrt{1-x^2} + C$

$$\int e^x \cos x dx = \frac{e^x}{2} (\sin x + \cos x) + C \quad \int e^x \sin x dx = \frac{e^x}{2} (\sin x - \cos x) + C$$

$$\int \frac{\log(1-x)}{x} dx = -\left(\frac{x+1}{x}\right) \log(1-x) - \log x + C$$

$$\int \frac{t}{(t-1)^2} dt = \frac{1}{2} \log(t-1)^2 - \frac{1}{t-1} + C \quad \int x^2 e^{ax} dx = e^{ax} \left(\frac{x^2}{2} - \frac{2x}{a^2} + \frac{2}{a^3} \right)$$

$$\int \frac{\cos t}{x^2} dt = \log|x| + C$$

$$\int t \sin kt dt = \frac{1}{k} \left[\sin kt - t \cos kt \right] + C$$

$$\int t \cos kt dt = \frac{1}{k} \left[t \sin kt + \frac{\cos kt}{k} \right] + C$$

$$\int e^{-x} \sin \omega x dx = \frac{\omega e^{-x}}{1+\omega^2} \left[-\cos \omega x - \frac{\sin \omega x}{\omega} \right]$$

$$\int e^{-x} \cos \omega x dx = \frac{\omega}{1+\omega^2} e^{-x} \left[\sin \omega x - \frac{\cos \omega x}{\omega} \right]$$

$$\int e^{-x} \sin \omega x dx = \frac{\omega}{\omega^2+1} e^{-x} \left[\sin \omega x - \omega \frac{\cos \omega x}{\omega} \right]$$

$$\int e^{\alpha t} \cdot t dt = \frac{t e^{\alpha t}}{\alpha} - \frac{e^{\alpha t}}{\alpha^2}$$

$$\int x^2 \sin \alpha x dx = \left(\frac{2-\alpha^2 x^2}{\alpha^3} \right) \cos \alpha x + \frac{2x}{\alpha^2} \sin \alpha x$$

$$\int x^2 \cos \alpha x dx = \left(\frac{\alpha x^2 - 2}{\alpha^2} \right) \sin \alpha x + \frac{2x}{\alpha^2} \cos \alpha x$$

$$\int t e^{-j \frac{2\pi m}{T} t} dt = \frac{1}{2\pi m} e^{-j \frac{2\pi m}{T} t} \left[\frac{1}{2\pi m} + j t \right]$$

$$\int_{\mathbb{R}} e^{-x^2} dx = \sqrt{\pi}$$