

Tabla de integrales

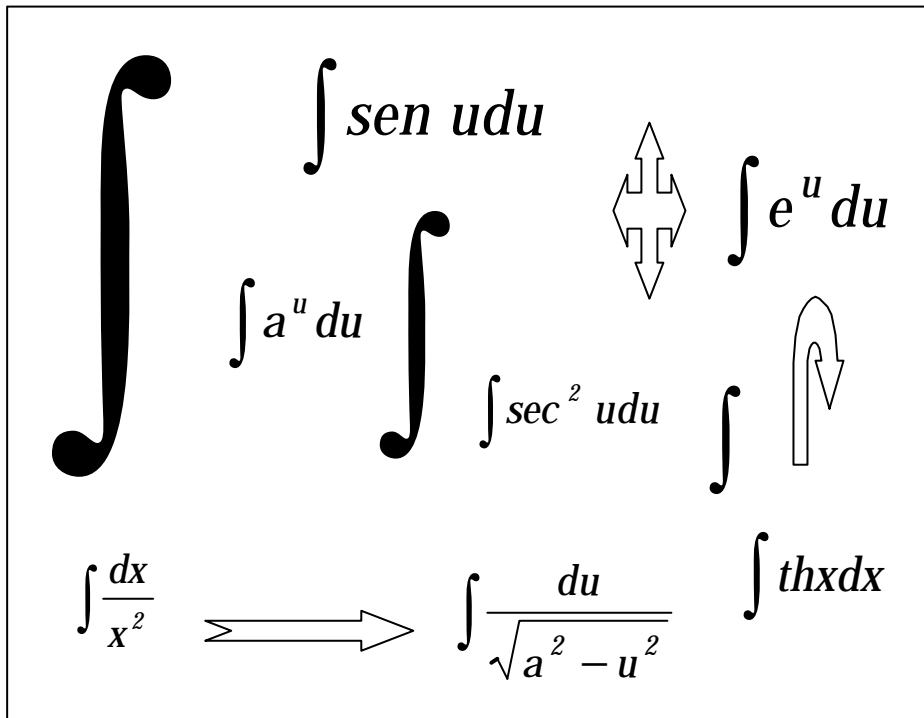


TABLA DE INTEGRALES

1) $\int \frac{d}{dx} [f(x)] dx = f(x) + C$	
2) $\int [f(x) \pm g(x)] dx = \int f(x) dx \pm \int g(x) dx$	
3) $\int k f(x) dx = k \int f(x) dx$	$k = \text{cte.}$
4) $\int f'(x) f(x)^m dx = \frac{[f(x)]^{m+1}}{m+1} + C$	$m \neq -1$
5) $\int \frac{f'(x)}{f(x)} dx = \text{Log} f(x) + C$	
6) $\int f'(x) a^{f(x)} dx = \frac{a^{f(x)}}{\text{Log}a} + C$	
7) $\int f'(x) e^{f(x)} dx = e^{f(x)} + C$	
8) $\int f'(x) \text{sen}[f(x)] dx = -\text{cos}[f(x)] + C$	
9) $\int f'(x) \text{cos}[f(x)] dx = \text{sen}[f(x)] + C$	

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10) $\int f'(x) \operatorname{tg}[f(x)] dx = -\operatorname{Log} \cos[f(x)] + C$
11) $\int f'(x) \operatorname{cotg}[f(x)] dx = \operatorname{Log} \operatorname{sen}[f(x)] + C$
12) $\int f'(x) \operatorname{sec}[f(x)] dx = \operatorname{Log} \operatorname{sec}[f(x)] + \operatorname{tg}[f(x)] + C$
13) $\int f'(x) \operatorname{cosec}[f(x)] dx = \operatorname{Log} \operatorname{cosec}[f(x)] - \operatorname{cotg}[f(x)] + C$
14) $\int f'(x) \operatorname{sec}^2[f(x)] dx = \operatorname{tg}[f(x)] + C$
15) $\int f'(x) \operatorname{cosec}^2[f(x)] dx = -\operatorname{cotg}[f(x)] + C$
16) $\int f'(x) \operatorname{sec}[f(x)] \operatorname{tg}[f(x)] dx = \operatorname{sec}[f(x)] + C$
17) $\int f'(x) \operatorname{cosec}[f(x)] \operatorname{cotg}[f(x)] dx = -\operatorname{cosec}[f(x)] + C$
18) $\int \frac{f'(x)}{\sqrt{a^2 - [f(x)]^2}} dx = \operatorname{arcsen}\left(\frac{f(x)}{a}\right) + C$

$19) \int \frac{-f'(x)}{\sqrt{a^2 - [f(x)]^2}} dx = \arccos\left(\frac{f(x)}{a}\right) + C$
$20) \int \frac{f'(x)}{a^2 + [f(x)]^2} dx = \frac{1}{a} \operatorname{arctg}\left(\frac{f(x)}{a}\right) + C$
$21) \int \frac{f'(x)}{[f(x)]^n} dx = \frac{[f(x)]^{1-n}}{1-n} + C \quad n \neq 1$
$22) \int \frac{f'(x)}{1 - [f(x)]^2} dx = \operatorname{argth}[f(x)] + C = \frac{1}{2} \operatorname{Log} \frac{ 1+x }{ 1-x } + C$
$23) \int \frac{f'(x)}{\sqrt{[f(x)]^2 + 1}} dx = \operatorname{argsh}[f(x)] + C = \operatorname{Log} x + \sqrt{x^2 + 1} + C$
$24) \int \frac{f'(x)}{\sqrt{[f(x)]^2 - 1}} dx = \operatorname{argch}[f(x)] + C = \operatorname{Log} x + \sqrt{x^2 - 1} + C$
$25) \int f'(x) \operatorname{sh}[f(x)] dx = \operatorname{ch}[f(x)] + C$
$26) \int f'(x) \operatorname{ch}[f(x)] dx = \operatorname{sh}[f(x)] + C$
$27) \int f'(x) \operatorname{th}[f(x)] dx = \operatorname{Log} \operatorname{ch}[f(x)] + C$

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$28) \int \frac{f'(x)}{\operatorname{ch}^2[f(x)]} dx = \operatorname{th}[f(x)] + C$
$29) \int f'(x) \operatorname{sech}[f(x)] dx = 2 \operatorname{arctg} e^{f(x)} + C$
$30) \int f'(x) \operatorname{cosech}[f(x)] dx = \operatorname{Log} \operatorname{th}[f(x)/2] + C$
$31) \int f'(x) \operatorname{argsh}\left(\frac{f(x)}{a}\right) dx = f(x) \operatorname{argsh}\left(\frac{f(x)}{a}\right) - \sqrt{[f(x)]^2 + a^2} + C$
$32) \int f'(x) \operatorname{argch}\left(\frac{f(x)}{a}\right) dx = f(x) \operatorname{argch}\left(\frac{f(x)}{a}\right) \pm \sqrt{[f(x)]^2 - a^2} + C$ <p style="text-align: center;"> $\left(- \text{ si } \operatorname{argch}\left(\frac{f(x)}{a}\right) > 0; + \text{ si } \operatorname{argch}\left(\frac{f(x)}{a}\right) < 0 \right)$ </p>
$33) \int f'(x) \operatorname{argth}\left(\frac{f(x)}{a}\right) dx = f(x) \operatorname{argth}\left(\frac{f(x)}{a}\right) +$ $+ \frac{a}{2} \operatorname{Log} f^2(x) - a^2 + C$