TABELA DE INTEGRAIS

1.	$\int du = u + c$	2.	$\int u^n du = \dfrac{u^{n+1}}{n+1} + c, \quad n \neq -1.$
3.	$\int \dfrac{du}{u} = \ln|u| + c.$	4.	$\int a^u du = \dfrac{a^u}{\ln a} + c, \quad a > 0, a \neq 1.$
5.	$\int e^u du = e^u + c.$	6.	$\int \operatorname{sen} u\, du = -\cos u + c.$
7.	$\int \cos u\, du = \operatorname{sen} u + c.$	8.	$\int \operatorname{tg} u\, du = \ln|\sec u| + c.$
9.	$\int \operatorname{cotg} u\, du = \ln|\operatorname{sen} u| + c.$	10,	$\int \sec u\, du = \ln|\sec u + \operatorname{tg} u| + c.$
11.	$\int \operatorname{cosec} u\, du = \ln|\operatorname{cosec} u - \operatorname{cotg} u| + c.$	12.	$\int \sec u \operatorname{tg} u\, du = \sec u + c.$
13.	$\int \operatorname{cosec} u \operatorname{cotg} u\, du = -\operatorname{cosec} u + c.$	14.	$\int \sec^2 u\, du = \operatorname{tg} u + c.$
15.	$\int \operatorname{cosec}^2 u\, du = -\operatorname{cotg} u + c.$	16.	$\int \dfrac{du}{u^2 + a^2} = \dfrac{1}{a} arc\, \operatorname{tg} \dfrac{u}{a} + c.$
17.	$\int \dfrac{du}{u^2 - a^2} = \dfrac{1}{2a}\ln\left|\dfrac{u-a}{u+a}\right| + c, \quad u^2 > a^2.$	18.	$\int \dfrac{du}{\sqrt{u^2 + a^2}} = \ln\left|u + \sqrt{u^2 + a^2}\right| + c$
19.	$\int \dfrac{du}{u\sqrt{u^2 - a^2}} = \dfrac{1}{a} arc\, \sec\left|\dfrac{u}{a}\right| + c.$	20.	$\int \dfrac{du}{\sqrt{u^2 - a^2}} = \ln\left|u + \sqrt{u^2 - a^2}\right| + c.$
21.	$\int \dfrac{du}{\sqrt{a^2 - u^2}} = arc\, \operatorname{sen} \dfrac{u}{a} + c, \quad u^2 < a^2.$		

Fórmulas de Recorrências

1. $\int \operatorname{sen}^n au\, du = -\dfrac{\operatorname{sen}^{n-1} au \cos au}{an} + \left(\dfrac{n-1}{n}\right)\int \operatorname{sen}^{n-2} au\, du$

2. $\int \cos^n au\, du = \dfrac{\operatorname{sen} au \cos^{n-1} au}{an} + \left(\dfrac{n-1}{n}\right)\int \cos^{n-2} au\, du$

3. $\int \operatorname{tg}^n au\, du = \dfrac{\operatorname{tg}^{n-1} au}{a(n-1)} - \int \operatorname{tg}^{n-2} au\, du$

4. $\int \operatorname{cotg}^n au\, du = -\dfrac{\operatorname{cotg}^{n-1} au}{a(n-1)} - \int \operatorname{cotg}^{n-2} au\, du$

5. $\int \sec^n au\, du = \dfrac{\sec^{n-2} au\, \operatorname{tg} au}{a(n-1)} + \left(\dfrac{n-2}{n-1}\right)\int \sec^{n-2} au\, du$

6. $\int \operatorname{cosec}^n au\, du = -\dfrac{\operatorname{cosec}^{n-2} au\, \operatorname{cotg} au}{a(n-1)} + \left(\dfrac{n-2}{n-1}\right)\int \operatorname{cosec}^{n-2} au\, du$

Artifícios de Cálculo

$$\int e^x\, dx = e^x + C$$

$$\int e^{nx}\, dx = \dfrac{1}{n} e^{nx} + C$$

$$\int \cos nx\, dx = \dfrac{1}{n} \operatorname{sen} nx + C$$

$$\int \operatorname{sen} nx\, dx = -\dfrac{1}{n} \cos nx + C$$

Artifícios de Cálculo

$\operatorname{sen}^2 x + \cos^2 x = 1 \ (impar)$

$\operatorname{sen}^2 x = \dfrac{1 - \cos 2x}{2} \ (par)$

$\cos^2 x = \dfrac{1 + \cos 2x}{2} \ (par)$

$\operatorname{sen} x . \cos x = \dfrac{1}{2} \operatorname{sen} 2x$

Integral indefinida	Regra geral
$\int f(x)dx = f(x) + C$	$\int u^m\, du = \dfrac{u^{m+1}}{m+1} + C$
Substituição	**Por partes**
$\int f(x)dx = \int u\, du$	$u.v - \int v\, du$
Itegração Função Racional Parciais	

		Exemplos:
u	**L**ogarítmicas	$\ln(x)$
	Inversas	$\tan^{-1}(x)$
	Algébricas	$3x^2 + 9x - 7$
	Trigonométricas	$\tan(x)$
dv	**E**xponenciais	e^x

Obs. Quando tiver trigonométricas e exponencial juntas pegar exponencial