

Fórmulas de integrales

1. $\int du = u + C$
2. $\int a \, du = a \int du = au + C$
3. $\int u^n du = \frac{u^{n+1}}{n+1} + C$
4. $\int \frac{du}{u} = \ln |u| + C$
5. $\int a^u du = \frac{a^u}{\ln |a|} + C$
6. $\int e^u du = e^u + C$
7. $\int \sin u \, du = -\cos u + C$
8. $\int \cos u \, du = \sin u + C$
9. $\int \sec^2 u \, du = \tan u + C$
10. $\int \csc^2 u \, du = -\cot u + C$
11. $\int \sec u \tan u \, du = \sec u + C$
12. $\int \csc u \cot u \, du = -\csc u + C$
13. $\int \tan u \, du = -\ln \cos u + C = \ln \sec u + C$
14. $\int \cot u \, du = \ln \sin u + C$
15. $\int \sec u \, du = \ln(\sec u + \tan u) + C$
16. $\int \csc u \, du = \ln(\csc u - \cot u) + C$
17. $\int \frac{du}{u^2 + a^2} = \frac{1}{a} \arctan \frac{u}{a} + C$
18. $\int \frac{du}{u^2 - a^2} = \frac{1}{2a} \ln \left(\frac{u-a}{u+a} \right) + C$
19. $\int \frac{du}{a^2 - u^2} = \frac{1}{2a} \ln \left(\frac{a+u}{a-u} \right) + C$
20. $\int \frac{du}{\sqrt{a^2 - u^2}} = \arcsin \frac{u}{a} + C$

21. $\int \frac{du}{u\sqrt{u^2 - a^2}} = \frac{1}{a} \operatorname{arcsec} \frac{u}{a} + C$
22. $\int \frac{du}{\sqrt{u^2 \pm a^2}} = \ln \left(u + \sqrt{u^2 \pm a^2} \right) + C$
23. $\int \sqrt{a^2 - u^2} \, du = \frac{u}{2} \sqrt{a^2 - u^2} + \frac{a^2}{2} \arcsin \frac{u}{a}$
24. $\int \sqrt{u^2 \pm a^2} \, du = \frac{u}{2} \sqrt{u^2 \pm a^2} \pm \frac{a^2}{2} \ln \left(u + \sqrt{u^2 \pm a^2} \right) + C$

Identidades trigonométricas

$$\sin u = \frac{1}{\csc u} \quad ; \quad \cos u = \frac{1}{\sec u} \quad ; \quad \tan u = \frac{\sin u}{\cos u}$$

$$\csc u = \frac{1}{\sin u} \quad ; \quad \sec u = \frac{1}{\cos u} \quad ; \quad \cot u = \frac{\cos u}{\sin u}$$

$$\sin^2 u + \cos^2 u = 1$$

$$\tan^2 u + 1 = \sec^2 u$$

$$\cot^2 u + 1 = \csc^2 u$$

$$\sin^2 u = \frac{1}{2}(1 - \cos 2u)$$

$$\cos^2 u = \frac{1}{2}(1 + \cos 2u)$$

$$\sin 2u = 2 \sin u \cos u$$

$$\cos 2u = \cos^2 u - \sin^2 u$$

$$\cos 2u = 2 \cos^2 u - 1$$

$$\tan 2u = \frac{2 \tan u}{1 - \tan^2 u}$$

$$\sin(u \pm v) = \sin u \cos v \pm \cos u \sin v$$

$$\cos(u \pm v) = \cos u \cos v \mp \sin u \sin v$$

$$\tan(u \pm v) = \frac{\tan u \pm \tan v}{1 \mp \tan u \tan v}$$