

## FORMULARIO - INTEGRALES

1. $\int 1 du = u + C$	16. $\int \sec^2 u du = \tan u + C$
2. $\int u^n du = \frac{u^{n+1}}{n+1} + C, n \neq -1$	17. $\int \csc^2 u du = -\cot u + C$
3. $\int (ax+b)^n dx = \frac{(ax+b)^{n+1}}{n+1} \frac{1}{a} + C, n \neq -1$	18. $\int \sec u \cdot \tan u du = \sec u + C$
	19. $\int \csc u \cdot \cot u du = -\csc u + C$
4. $\int \frac{1}{u} du = \ln u  + C$	20. $\int \frac{1}{a^2 + u^2} du = \frac{1}{a} \arctan\left(\frac{u}{a}\right) + C$
5. $\int \frac{1}{ax+b} dx = \ln ax+b  \frac{1}{a} + C$	21. $\int \frac{1}{u^2 - a^2} du = \frac{1}{2a} \ln \left  \frac{u-a}{u+a} \right  + C$
6. $\int e^u du = e^u + C$	22. $\int \frac{1}{a^2 - u^2} du = \frac{1}{2a} \ln \left  \frac{u+a}{u-a} \right  + C$
7. $\int e^{ax+b} dx = e^{ax+b} \frac{1}{a} + C$	23. $\int \frac{1}{\sqrt{a^2 - u^2}} du = \arcsen\left(\frac{u}{a}\right) + C$
8. $\int a^u du = \frac{a^u}{\ln a} + C$	24. $\int \frac{1}{\sqrt{u^2 - a^2}} du = \ln \left  u + \sqrt{u^2 - a^2} \right  + C$
9. $\int \operatorname{senu} du = -\cos u + C$	25. $\int \frac{1}{\sqrt{u^2 + a^2}} du = \ln \left  u + \sqrt{u^2 + a^2} \right  + C$
10. $\int \cos u du = \operatorname{senu} + C$	26. $\int \frac{1}{u\sqrt{u^2 - a^2}} du = \frac{1}{a} \operatorname{arc sec} \left( \frac{ u }{a} \right) + C$
11. $\int \cos(ax+b) dx = \operatorname{sen}(ax+b) \frac{1}{a} + C$	
12. $\int \tan u du = \ln \sec u  + C$	27. $\int \frac{1}{u\sqrt{a^2 - u^2}} du = -\frac{1}{a} \ln \left  \frac{a + \sqrt{a^2 - u^2}}{u} \right  + C$
12. $\int \tan u du = -\ln \cos u  + C$	28. $\int \frac{1}{u\sqrt{a^2 + u^2}} du = -\frac{1}{a} \operatorname{csch}^{-1} \left  \frac{u}{a} \right  + C$
13. $\int \cot u du = \ln \operatorname{senu}  + C$	29. $\int \sqrt{u^2 + a^2} du = \frac{1}{2} \left[ u\sqrt{u^2 + a^2} + a^2 \ln \left( u + \sqrt{u^2 + a^2} \right) \right] + C$
14. $\int \sec u du = \ln \sec u + \tan u  + C$	30. $\int \sqrt{u^2 - a^2} du = \frac{1}{2} \left[ u\sqrt{u^2 - a^2} - a^2 \ln \left( u + \sqrt{u^2 - a^2} \right) \right] + C$
15. $\int \csc u du = \ln \csc u - \cot u  + C$	31. $\int \sqrt{a^2 - u^2} du = \frac{1}{2} \left[ u\sqrt{a^2 - u^2} + a^2 \sin^{-1} \frac{u}{a} \right] + C$

## IDENTIDADES TRIGONOMÉTRICAS

1. $\sin^2 x + \cos^2 x = 1$	7. $\operatorname{sen} 2x = 2 \operatorname{sen} x \cdot \cos x$
2. $1 + \tan^2 x = \sec^2 x$	8. $\operatorname{sen} x \cdot \csc x = 1$
3. $1 + \cot^2 x = \csc^2 x$	9. $\cos x \cdot \sec x = 1$
	10. $\tan x \cdot \cot x = 1$
4. $\cos^2 x = \frac{1}{2}(1 + \cos 2x)$	11. $\operatorname{sen} x \cdot \cos y = \frac{1}{2}(\operatorname{sen}(x-y) + \operatorname{sen}(x+y))$
5. $\operatorname{sen}^2 x = \frac{1}{2}(1 - \cos 2x)$	12. $\cos x \cdot \cos y = \frac{1}{2}(\cos(x-y) + \cos(x+y))$
6. $\cos 2x = \cos^2 x - \operatorname{sen}^2 x$	13. $\operatorname{sen} x \cdot \operatorname{sen} y = \frac{1}{2}(\cos(x-y) - \cos(x+y))$

