Formulario de Integrales

(Miguel Ángel Castillo)

1. $\int c\,du = cu + c$

2. $\int u\,du = \frac{1}{2}u^2 + c$

3. $\int u^n\,du = \frac{u^{n+1}}{n+1} + c, \quad \text{si} \quad n \neq -1$

4. $\int \frac{1}{u}du = \ln|u| + c$

5. $\int e^u\,du = e^u + c$

6. $\int a^u\,du = \frac{1}{\ln a}a^u + c$

7. $\int \operatorname{sen} u\,du = -\cos u + c$

8. $\int \cos u\,du = \operatorname{sen} u + c$

9. $\int \tan u\,du = \ln|\sec u| + c$

10. $\int \cot u\,du = \ln|\operatorname{sen} u| + c$

11. $\int \sec u\,du = \ln|\sec u + \tan u| + c$

12. $\int \csc u\,du = \ln|\csc u - \cot u| + c$

13. $\int \sec^2 u\,du = \tan u + c$

14. $\int \csc^2 u\,du = -\cot u + c$

15. $\int \sec u \tan u\,du = \sec u + c$

16. $\int \csc u \cot u\,du = -\csc u + c$

17. $\int \frac{1}{1+u^2}du = \tan^{-1} u + c$

18. $\int \frac{1}{a^2+u^2}du = \frac{1}{a}\tan^{-1}\left(\frac{u}{a}\right) + c$

19. $\int \frac{1}{\sqrt{1-u^2}}du = \operatorname{sen}^{-1} u + c$

20. $\int \frac{1}{\sqrt{a^2-u^2}}du = \operatorname{sen}^{-1}\left(\frac{u}{a}\right) + c$

21. $\int \frac{1}{u\sqrt{u^2-1}}du = \sec^{-1} u + c$

22. $\int \frac{1}{u\sqrt{u^2-a^2}}du = \frac{1}{a}\sec^{-1}\left(\frac{u}{a}\right) + c$

20. $\int c f(u)du = c\int f(u)du$

21. $\int [f(u) + g(u)]du = \int f(u)du + \int g(u)du$