Fórmulas de Integración

1. $\int dx = x + c$

2. $\int kdx = kx + c$

3. $\int x^n dx = \frac{x^{n+1}}{n+1} + c$

4. $\int kfdx = k\int fdx$

5. $\int f^n f'\,dx = \frac{f^{n+1}}{n+1} + c$

6. $\int udv = uv - \int vdu$

"una vaca sin cola vestida de uniforme"

7. $\int \sin x dx = -\cos x + c$

8. $\int \cos x dx = \sin x + c$

9. $\int \tan x dx = \ln|\sec x| + c$

10. $\int \cot x dx = \ln|\sin x| + c$

11. $\int \sec x dx = \ln|\sec x + \tan x| + c$

12. $\int \csc x dx = \ln|\csc x - \cot x| + c$

13. $\int \sec^2 x dx = \tan x + c$

14. $\int \csc^2 x dx = -\cot x + c$

15. $\int \sec^3 x dx = \frac{1}{2}\sec x \tan x + \frac{1}{2}\ln|\sec x + \tan x| + c$

16. $\int \csc^3 x dx = -\frac{1}{2}\csc x \cot x + \frac{1}{2}\ln|\csc x - \cot x| + c$

17. $\int \frac{dx}{\sqrt{1-x^2}} = \arcsin x + c$

18. $\int \frac{dx}{\sqrt{a^2 - x^2}} = \arcsin\frac{x}{a} + c$

19. $\int \frac{f'dx}{\sqrt{a^2 - f^2}} = \arcsin\frac{f}{a} + c$

20. $\int \frac{dx}{1+x^2} = \arctan x + c$

21. $\int \frac{dx}{a^2 + x^2} = \frac{1}{a}\arctan\frac{x}{a} + c$

22. $\int \frac{f'dx}{a^2 + f^2} = \frac{1}{a}\arctan\frac{f}{a} + c$

23. $\int \frac{dx}{x\sqrt{x^2 - 1}} = arc\sec x + c$

24. $\int \frac{dx}{x\sqrt{x^2 - a^2}} = \frac{1}{a} arc\sec\frac{x}{a} + c$

25. $\int \frac{f'dx}{f\sqrt{f^2 - a^2}} = \frac{1}{a} arc\sec\frac{f}{a} + c$

26. $\int e^x dx = e^x + c$

27. $\int e^{kx} dx = \frac{e^{kx}}{k} + c$

28. $\int e^f f'\,dx = e^f + c$

29. $\int a^x dx = \frac{a^x}{\ln a} + c$

30. $\int a^{kx} dx = \frac{a^{kx}}{k \ln a} + c$

31. $\int a^f f'\,dx = \frac{a^f}{\ln a} + c$

32. $\int \frac{dx}{x} = \int \frac{1}{x} dx = \int x^{-1} dx = \ln|x| + c$

33. $\int \frac{f'}{f} dx = \ln|f| + c$

34. $\int \sinh x dx = \cosh x + c$

35. $\int \cosh x dx = \sinh x + c$

Sustitución universal

36. $u = \tan(x/2)$

37. $\sin x = \frac{2u}{1+u^2}$

38. $\cos x = \frac{1-u^2}{1+u^2}$

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

40. $dx = \frac{2}{1+u^2} du$

M.I. Carlos Gastelum-Acosta