Integrales Indefinidas Inmediatas

1. $\int x^{\alpha}\,dx = \frac{x^{\alpha+1}}{\alpha+1} + C \quad (\alpha \neq -1)$ (aquí y en las fórmulas siguientes C designa una constante arbitraria)

2. $\int \frac{dx}{x} = \ln|x| + C$

3. $\int \operatorname{sen} x = -\cos x + C$

4. $\int \cos x = \operatorname{sen} x + C$

5. $\int \frac{dx}{\cos^2 x} = \operatorname{tg} x + C$

6. $\int \frac{dx}{\operatorname{sen}^2 x} = -\operatorname{ctg} x + C$

7. $\int \operatorname{tg} x = -\ln|\cos x| + C$

8. $\int \operatorname{ctg} x = \ln|\operatorname{sen} x| + C$

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

10. $\int a^x\,dx = \frac{a^x}{\ln a} + C$

11. $\int \frac{dx}{1+x^2} = \operatorname{arc\,tg} x + C$

12. $\int \frac{dx}{a^2+x^2} = \frac{1}{a}\operatorname{arc\,tg}\frac{x}{a} + C$

13. $\int \frac{dx}{a^2-x^2} = \frac{1}{2a}\ln\left|\frac{a+x}{a-x}\right| + C$

14. $\int \frac{dx}{x^2-a^2} = \frac{1}{2a}\ln\left|\frac{x-a}{x+a}\right| + C$

15. $\int \frac{dx}{\sqrt{1-x^2}} = \operatorname{arcsen} x + C$

16. $\int \frac{dx}{\sqrt{a^2-x^2}} = \operatorname{arcsen}\frac{x}{a} + C$

17. $\int \frac{dx}{\sqrt{x^2\pm a^2}} = \ln\left|x + \sqrt{x^2\pm a^2}\right| + C$

18. $\int \sqrt{a^2-x^2}\,dx = \frac{a^2}{2}\operatorname{arcsen}\frac{x}{a} + \frac{x}{2}\sqrt{a^2-x^2} + C$

19. $\int \sqrt{x^2+a}\,dx = \frac{a}{2}\ln\left|x + \sqrt{x^2+a}\right| + \frac{x}{2}\sqrt{x^2+a} + C$

20. $\int \operatorname{senh} x = \cosh x + C$

21. $\int \cosh x = \operatorname{senh} x + C$

22. $\int \operatorname{tgh} x = \ln\cosh x + C$

23. $\int \operatorname{senh}^2 x = \frac{\operatorname{senh} 2x}{4} - \frac{x}{2} + C$

24. $\int \cosh^2 x = \frac{\operatorname{senh} 2x}{4} + \frac{x}{2} + C$