

Fundamentos matemáticos para la Ingeniería

Grado en Arquitectura Técnica

Tema 7

Tabla de primitivas

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Tabla de primitivas

1. $\int f'(x)dx = f(x) + c.$
 2. $\int x^n dx = \frac{x^{n+1}}{n+1} + c$ ($n \in \mathbb{R}, n \neq -1$).
 3. $\int \frac{dx}{x} = \ln|x| + c.$
 4. $\int e^x dx = e^x + c.$
 5. $\int a^x dx = \frac{a^x}{\ln a} + c$ ($a > 0, a \neq 1$).
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6. $\int \operatorname{sen} x dx = -\cos x + c.$
 7. $\int \cos x dx = \operatorname{sen} x + c.$
 8. $\int \tan x dx = -\ln|\cos x| + c.$
 9. $\int \sec x dx = \ln|\sec x + \tan x| + c.$
 10. $\int \csc x dx = \ln|\csc x - \cot x| + c.$
 11. $\int \cot x dx = \ln|\operatorname{sen} x| + c.$
 12. $\int \sec^2 x dx = \tan x + c.$
 13. $\int \csc^2 x dx = -\cot x + c.$
 14. $\int \sec x \tan x dx = \sec x + c.$
 15. $\int \csc x \cot x dx = -\csc x + c.$
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16. $\int \frac{dx}{x^2+a^2} = \frac{1}{a} \operatorname{atan}(x/a) + c.$
 17. $\int \frac{dx}{x^2-a^2} = \frac{1}{2a} \ln \left| \frac{x-a}{x+a} \right| + c.$
 18. $\int \frac{dx}{a^2-x^2} = \frac{1}{2a} \ln \left| \frac{x+a}{x-a} \right| + c.$
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19. $\int \sqrt{x^2 + a^2} dx = \frac{1}{2} [x\sqrt{x^2 + a^2} + a^2 \ln|x + \sqrt{x^2 + a^2}|] + c.$
 20. $\int \sqrt{x^2 - a^2} dx = \frac{1}{2} [x\sqrt{x^2 - a^2} - a^2 \ln|x + \sqrt{x^2 - a^2}|] + c.$
 21. $\int \sqrt{a^2 - x^2} dx = \frac{1}{2} [x\sqrt{a^2 - x^2} + a^2 \operatorname{asen}(x/a)] + c.$
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22. $\int \frac{dx}{\sqrt{x^2+a^2}} = \ln|x + \sqrt{x^2 + a^2}| + c.$
 23. $\int \frac{dx}{\sqrt{x^2-a^2}} = \ln|x + \sqrt{x^2 - a^2}| + c.$
 24. $\int \frac{dx}{\sqrt{a^2-x^2}} = \operatorname{asen}(x/a) + c.$
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