

GLOBAL
EDITION



Differential Equations and Boundary Value Problems

Computing and Modeling

FIFTH EDITION

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ALWAYS LEARNING

PEARSON

Table of Integrals

ELEMENTARY FORMS

- | | |
|--|---|
| 1. $\int u \, dv = uv - \int v \, du$ | 10. $\int \sec u \tan u \, du = \sec u + C$ |
| 2. $\int u^n \, du = \frac{1}{n+1} u^{n+1} + C \quad \text{if } n \neq -1$ | 11. $\int \csc u \cot u \, du = -\csc u + C$ |
| 3. $\int \frac{du}{u} = \ln u + C$ | 12. $\int \tan u \, du = \ln \sec u + C$ |
| 4. $\int e^u \, du = e^u + C$ | 13. $\int \cot u \, du = \ln \sin u + C$ |
| 5. $\int a^u \, du = \frac{a^u}{\ln a} + C$ | 14. $\int \sec u \, du = \ln \sec u + \tan u + C$ |
| 6. $\int \sin u \, du = -\cos u + C$ | 15. $\int \csc u \, du = \ln \csc u - \cot u + C$ |
| 7. $\int \cos u \, du = \sin u + C$ | 16. $\int \frac{du}{\sqrt{a^2 - u^2}} = \sin^{-1} \frac{u}{a} + C$ |
| 8. $\int \sec^2 u \, du = \tan u + C$ | 17. $\int \frac{du}{a^2 + u^2} = \frac{1}{a} \tan^{-1} \frac{u}{a} + C$ |
| 9. $\int \csc^2 u \, du = -\cot u + C$ | 18. $\int \frac{du}{a^2 - u^2} = \frac{1}{2a} \ln \left \frac{u+a}{u-a} \right + C$ |

TRIGONOMETRIC FORMS

- | | |
|--|---|
| 19. $\int \sin^2 u \, du = \frac{1}{2}u - \frac{1}{4}\sin 2u + C$ | 23. $\int \sin^3 u \, du = -\frac{1}{3}(2 + \sin^2 u) \cos u + C$ |
| 20. $\int \cos^2 u \, du = \frac{1}{2}u + \frac{1}{4}\sin 2u + C$ | 24. $\int \cos^3 u \, du = \frac{1}{3}(2 + \cos^2 u) \sin u + C$ |
| 21. $\int \tan^2 u \, du = \tan u - u + C$ | 25. $\int \tan^3 u \, du = \frac{1}{2}\tan^2 u + \ln \cos u + C$ |
| 22. $\int \cot^2 u \, du = -\cot u - u + C$ | 26. $\int \cot^3 u \, du = -\frac{1}{2}\cot^2 u - \ln \sin u + C$ |
| 27. $\int \sec^3 u \, du = \frac{1}{2}\sec u \tan u + \frac{1}{2}\ln \sec u + \tan u + C$ | |
| 28. $\int \csc^3 u \, du = -\frac{1}{2}\csc u \cot u + \frac{1}{2}\ln \csc u - \cot u + C$ | |
| 29. $\int \sin au \sin bu \, du = \frac{\sin(a-b)u}{2(a-b)} - \frac{\sin(a+b)u}{2(a+b)} + C \quad \text{if } a^2 \neq b^2$ | |

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