


$$y' = \frac{dy}{dx}; dy = y'.dx \rightarrow y = \int y'.dx$$

| Integrales inmediatas con una variable independiente | Integrales inmediatas de funciones $u = f(x)$ |
|--|---|
| 1. $\int [f_1(x) \pm f_2(x) \pm \dots \pm f_n(x)] dx = \int f_1(x) dx \pm \int f_2(x) dx \pm \dots \pm \int f_n(x) dx$ |  <p style="text-align: right;"> Centro de Estudiantes Tecnológicos A.E.T.I. </p> |
| 2. $\int u \cdot dx = u \cdot v - \int v \cdot du$ (integración por partes) | |
| 3. $\int dx = x + c$ (c: cte. de integración) | |
| 4. $\int x^m \cdot dx = \frac{x^{m+1}}{m+1} + c$ ($\forall m \neq -1$) | 4. $\int u^m \cdot w dx = \frac{u^{m+1}}{m+1} + c$ ($\forall m \neq -1$) |
| 5. $\int \frac{1}{x} \cdot dx = \ln x + c$ | 5. $\int \frac{1}{u} \cdot w \cdot dx = \ln u + c$ |
| 6. $\int e^x \cdot dx = e^x + c$ | 6. $\int e^u \cdot w \cdot dx = e^u + c$ |
| 7. $\int a^x \cdot dx = \frac{a^x}{\ln(a)} + c$ | 7. $\int a^u \cdot w \cdot dx = \frac{a^u}{\ln a} + c$ |
| 8. $\int \text{sen}(x) \cdot dx = -\text{cos}(x) + c$ | 8. $\int \text{sen}(u) \cdot w \cdot dx = -\text{cos}(u) + c$ |
| 9. $\int \text{cos}(x) \cdot dx = \text{sen}(x) + c$ | 9. $\int \text{cos}(u) \cdot w \cdot dx = \text{sen}(u) + c$ |
| 10. $\int \text{tg}(x) \cdot dx = \ln \text{sec}(x) + c = -\ln \text{cos}(x) + c$ | 10. $\int \text{tg}(u) \cdot w \cdot dx = \ln \text{sec}(u) + c = -\ln \text{cos}(u) + c$ |
| 11. $\int \text{cosec}(x) \cdot dx = \ln \text{cosec}(x) - \text{cotg}(x) + c$ | 11. $\int \text{cosec}(u) \cdot w \cdot dx = \ln \text{cosec}(u) - \text{cotg}(u) + c$ |
| 12. $\int \text{sec}(x) \cdot dx = \ln \text{sec}(x) + \text{tg}(x) + c$ | 12. $\int \text{sec}(u) \cdot w \cdot dx = \ln \text{sec}(u) + \text{tg}(u) + c$ |
| 13. $\int \text{cotg}(x) \cdot dx = \ln \text{sen}(x) + c$ | 13. $\int \text{cotg}(u) \cdot w \cdot dx = \ln \text{sen}(u) + c$ |
| 14. $\int \frac{1}{\text{cos}^2 x} \cdot dx = \int \text{sec}^2(x) \cdot dx = \text{tg}(x) + c$ | 14. $\int \frac{1}{\text{cos}^2 u} \cdot w \cdot dx = \int \text{sec}^2(u) \cdot dx = \text{tg}(u) + c$ |
| 15. $\int \frac{1}{\text{sen}^2 x} \cdot dx = \int \text{cosec}^2(x) \cdot dx = -\text{cotg}(x) + c$ | 15. $\int \frac{1}{\text{sen}^2 u} \cdot w \cdot dx = \int \text{cosec}^2(u) \cdot dx = -\text{cotg}(u) + c$ |
| 16. $\int \text{sec}(x) \cdot \text{tg}(x) \cdot dx = \text{sec}(x) + c$ | 16. $\int \text{sec}(u) \cdot \text{tg}(u) \cdot w \cdot dx = \text{sec}(u) + c$ |
| 17. $\int \text{cosec}(x) \cdot \text{cotg}(x) \cdot dx = -\text{cosec } x + c$ | 17. $\int \text{cosec}(u) \cdot \text{cotg}(u) \cdot w \cdot dx = -\text{cosec } u + c$ |
| 18. $\int \frac{1}{\sqrt{1-x^2}} \cdot dx = \begin{cases} \text{arcsen}(x) + c \\ -\text{arccos}(x) + c \end{cases}$ | 18. $\int \frac{1}{\sqrt{1-u^2}} \cdot w \cdot dx = \begin{cases} \text{arcsen}(u) + c \\ -\text{arccos}(u) + c \end{cases}$ |
| 19. $\int \frac{1}{1+x^2} \cdot dx = \begin{cases} \text{arctg}(x) + c \\ -\text{arccotg}(x) + c \end{cases}$ | 19. $\int \frac{1}{1+u^2} \cdot w \cdot dx = \begin{cases} \text{arctg}(u) + c \\ -\text{arccotg}(u) + c \end{cases}$ |
| 20. $\int \frac{1}{x \cdot \sqrt{x^2-1}} \cdot dx = \begin{cases} \text{arcsec}(x) + c \\ -\text{arccosec}(x) + c \end{cases}$ | 20. $\int \frac{1}{u \cdot \sqrt{u^2-1}} \cdot w \cdot dx = \begin{cases} \text{arcsec}(u) + c \\ -\text{arccosec}(u) + c \end{cases}$ |