

TAREA: METODOS DE INTEGRACION.

1. Integración Por Partes.

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| 1. $\int x \cos x dx$ | 2. $\int x \operatorname{sen} x dx$ | 3. $\int x^2 \operatorname{sen} x dx$ | 4. $\int x \sec^2 5x dx$ |
| 5. $\int \frac{x}{\sqrt{x+1}} dx$ | 6. $\int x \sqrt{x+3} dx$ | 7. $\int \ln x dx$ | 8. $\int x \ln x dx$ |
| 9. $\int \frac{\ln x}{x^2} dx$ | 10. $\int e^x \operatorname{sen} x dx$ | 11. $\int e^{-x} \operatorname{sen} 2x dx$ | 12. $\int x^2 e^x dx$ |
| 13. $\int x^3 e^{-x^2} dx$ | 14. $\int x e^x dx$ | 15. $\int \operatorname{arccot} g x dx$ | |

2. Integración por Sustitución Trigonométrica.

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| 1. $\int \sqrt{9-x^2} dx$ | 2. $\int \frac{\sqrt{4-x^2}}{x^2} dx$ | 3. $\int \frac{x^2}{\sqrt{9-x^2}} dx$ | 4. $\int \frac{\sqrt{1-x^2}}{x} dx$ |
| 5. $\int \frac{x^2}{\sqrt{4-x^2}} dx$ | 6. $\int \frac{\sqrt{x^2-16}}{x^4} dx$ | 7. $\int \frac{1}{\sqrt{x^2-25}} dx$ | 8. $\int \frac{\sqrt{9-x^2}}{x^2} dx$ |
| 9. $\int \sqrt{x^2+16} dx$ | 10. $\int \frac{dx}{x^2 \sqrt{x^2+4}}$ | 11. $\int \frac{x}{\sqrt{x^2+4}} dx$ | 12. $\int \frac{dx}{\sqrt{9+x^2}}$ |
| 13. $\int \frac{dx}{\sqrt{x^2+2x+26}}$ | 14. $\int \frac{dx}{(x^2+8x+25)^{\frac{3}{2}}}$ | 15. $\int \frac{dx}{x^3 \sqrt{x^2+9}}$ | |

3. Integración por Fracciones Parciales.

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| 1. $\int \frac{x+5}{x^2+x-2} dx$ | 2. $\int \frac{x^3+x}{x-1} dx$ | 3. $\int \frac{3x-1}{x^2-x-6} dx$ | 4. $\int \frac{5x+3}{x^3-2x^2-3x} dx$ |
| 5. $\int \frac{x^2+2x-1}{2x^3+3x^2-2x} dx$ | 6. $\int \frac{x}{(x-3)^2} dx$ | 7. $\int \frac{3x^2-8x+13}{(x+3)(x-1)^2} dx$ | |
| 8. $\int \frac{x^2+2x+3}{x^3(x-1)(x+3)^2} dx$ | 9. $\int \frac{x^4-2x^2+4x+1}{x^3-x^2-x+1} dx$ | 10. $\int \frac{6x^2-3x+1}{(4x+1)(x^2+1)} dx$ | |
| 11. $\int \frac{2x^2-x+4}{x^3+4x} dx$ | 12. $\int \frac{-2x+4}{(x^2+1)(x-1)^2} dx$ | 13. $\int \frac{x}{(x+1)(x^2+2x+5)} dx$ | |
| 14. $\int \frac{6x^2-15x+22}{(x+3)(x^2+2)} dx$ | 15. $\int \frac{dx}{x(x^2+1)^2}$ | 16. $\int \frac{1-3x+2x^2-x^3}{x(x^2+1)^2} dx$ | |