

MAT 2464 - IME - Cálculo II
Segundo semestre de 2025
Prof. Oswaldo Rio Branco de Oliveira

Tabela de Primitivas

1. $\int c \, dx = cx + k$
2. $\int x^\alpha \, dx = \frac{x^{\alpha+1}}{\alpha+1} + k, \quad (\alpha \neq -1)$
3. $\int e^x \, dx = e^x + k$
4. $\int \frac{1}{x} \, dx = \ln |x| + k, \quad x \neq 0$
5. $\int \cos x \, dx = \operatorname{sen} x + k$
6. $\int \operatorname{sen} x \, dx = -\cos x + k$
7. $\int \sec^2 x \, dx = \operatorname{tg} x + k$
8. $\int \sec x \operatorname{tg} x \, dx = \sec x + k$
9. $\int \sec x \, dx = \ln |\sec x + \operatorname{tg} x| + k$
10. $\int \operatorname{tg} x \, dx = \ln |\sec x| + k$
11. $\int \operatorname{cosec} x \, dx = \ln |\operatorname{cosec} x - \operatorname{cotg} x| + k$
12. $\int \frac{1}{1+x^2} \, dx = \operatorname{arctg} x + k$
13. $\int \frac{dx}{\sqrt{1-x^2}} = \operatorname{arcsen} x + k$

Fórmulas de Primitivação

1. $\int \frac{f'(x)}{f(x)} \, dx = \ln |f(x)| + k$
2. $\int e^{f(x)} f'(x) \, dx = e^{f(x)} + k$
3. $\int f(x)^\alpha f'(x) \, dx = \frac{f(x)^{\alpha+1}}{\alpha+1} + k, \quad \alpha \neq -1$
4. $\int [\cos f(x)] f'(x) \, dx = \operatorname{sen} f(x) + k$