

Exercícios:

Avaliar as integrais a seguir utilizando a técnica de integração por partes.

$$\textcircled{1} \int x e^x dx = e^x(x-1) + C$$

$$\textcircled{2} \int x^2 e^x dx = e^x(x^2 - 2x + 2) + C$$

$$\textcircled{3} \int \ln(x) dx = x \ln(x) - x + C$$

$$\textcircled{4} \int x \ln(x) dx = \frac{x^2}{2} \ln(x) - \frac{x^2}{4} + C$$

$$\textcircled{5} \int \text{sen}^2(x) dx = -\frac{\text{sen}(x) \cos(x)}{2} + \frac{x}{2} + C$$

$$\textcircled{6} \int x \cos(3x) dx = \frac{x}{3} \text{sen}(3x) + \frac{\cos(3x)}{9} + C$$

$$\textcircled{7} \int e^x \text{sen}(x) dx = \frac{e^x}{2} (\text{sen}(x) - \cos(x)) + C$$