
1. (1 pt) Evaluate the definite integral

$$\int_0^1 x^2 \sqrt[6]{e^x} dx = \underline{\hspace{2cm}}$$

2. (1 pt) Use integration by parts to evaluate the integral.

$$\int 3x \ln(6x) dx$$

$$\underline{\hspace{2cm}} + C$$

3. (1 pt) Evaluate the indefinite integral

$$\int e^{7x} \sin(5x) dx$$

4. (1 pt) Evaluate the indefinite integral

$$\int \ln(x^2 + 11x + 18) dx$$

on an interval on which x is positive.

$$\underline{\hspace{2cm}}$$

5. (1 pt) Use integration by parts to evaluate the integral.

$$\int (\ln(7x))^2 dx$$

$$\underline{\hspace{2cm}} + C$$