

M120 Additional Practice with Integration by Parts (2/11)

1) Find $\int x e^{3x} dx$.

2) Find $\int x^4 \ln x dx$.

3) Find $\int x^2 e^{2x} dx$.

4) Find $\int \frac{\ln(2x)}{x^2} dx$.

5) Find $\int \ln 2x dx$.

6) Evaluate the definite integral. $\int_{-2}^1 \frac{x}{\sqrt{x+3}} dx$

7) Evaluate the definite integral. $\int_1^2 x \ln x dx$

8) Find the area between $y = (x - 4)e^x$ and the x-axis from $x = 4$ to $x = 8$.

9) Evaluate the integral and determine if it is convergent or divergent. $\int_0^{\infty} \ln x^2 dx$