

Problem 1: Find

$$\int \frac{\ln x}{x^2} dx$$

Problem 2: Find

$$\int (x + 2) \cos x dx$$

Problem 3: Evaluate

$$\int \ln(\sqrt{x}) dx$$

Extra Credit: Do NOT attempt this unless you have finished the rest of the quiz and are confident with your answers!

Evaluate the following integral:

$$\int \sqrt{e^{6x} + e^{4x}} dx$$