

MATH 20C: FUNDAMENTALS OF CALCULUS II
WORKSHEET, DAY #9

Problem 1. Evaluate the indefinite integral

$$\int \left(2e^x + x^{-0.1} - \frac{1.5}{x^2} \right) dx.$$

Problem 2. Evaluate the indefinite integral

$$\int x(x^2 + 4)^{10} dx.$$

Problem 3. Evaluate the indefinite integral

$$\int xe^{-x^2/2} dx.$$

Problem 4. Calculate the left Riemann sum for the function $f(x) = \frac{x+1}{x+2}$ over the interval $[0, 3]$ using $n = 3$ subdivisions.

Problem 5. Evaluate the definite integral

$$\int_0^9 (x + \sqrt{x}) dx.$$

Problem 6. Evaluate the definite integral

$$\int_1^2 \frac{\ln x}{x} dx.$$