MEMORIAL UNIVERSITY OF NEWFOUNDLAND

DEPARTMENT OF MATHEMATICS AND STATISTICS

Assignment 1

MATHEMATICS 1001

Fall 2025

Due: Wednesday, September 24th, 2025 at 6:00pm. See the Gradescope Handout for submission information.

Note: You should complete the WeBWorK problem sets "Elementary Indefinite Integrals" and "Indefinite Integrals with Linear Composition", as well as Worksheet 1.1, before you work on this assignment.

1. Evaluate the following indefinite integrals.

(a)
$$\int \csc(3x+8)\cot(3x+8)\,dx$$

(b)
$$\int [\sinh(4-u) + \sec^2(u-4)] du$$

(c)
$$\int \frac{(5-2x)^9}{3} dx$$

$$(d) \int \frac{3}{(5-2x)^9} \, dx$$

(e)
$$\int \frac{(5-x^9)^2}{3} dx$$

(f)
$$\int \frac{e^{5x} + e^{-5x}}{e^{3x}} dx$$

(g)
$$\int \cos(t)[\tan(t) - 4\sec(t)] dt$$