

MEMORIAL UNIVERSITY OF NEWFOUNDLAND

DEPARTMENT OF MATHEMATICS AND STATISTICS

ASSIGNMENT 2

MATHEMATICS 1001

WINTER 2025

Due: Monday, February 3rd, 2025 at 11:59pm. See the Gradescope Handout for submission information.

Note: You should complete the WeBWorK problem set “Indefinite Integrals by u -Substitution”, as well as Worksheet 1.2, before you work on this assignment.

1. Use u -substitution to evaluate the following indefinite integrals.

(a) $\int e^x \sec(e^x) dx$

(b) $\int \frac{x^3}{\sqrt{2x^2 + 1}} dx$

(c) $\int \frac{1 - 6x^2}{4x^3 - 2x + 3} dx$

(d) $\int \frac{x^4 + 3x^3 - 2x^2 + x - 8}{x^2 + 2} dx$