

MEMORIAL UNIVERSITY OF NEWFOUNDLAND

DEPARTMENT OF MATHEMATICS AND STATISTICS

ASSIGNMENT 1

MATHEMATICS 1001

WINTER 2025

Due: Monday, January 27th, 2025 at 11:59pm. See the Gradescope Handout for submission information.

Note: You should complete the WeBWorK problem set “Elementary Indefinite Integrals”, as well as Worksheet 1.1, before you work on this assignment.

1. Evaluate the following indefinite integrals.

(a) $\int \frac{x^3 + 5\sqrt{x} - 4}{\sqrt{x}} dx$

(b) $\int \frac{(4x - 5)^2}{x} dx$

(c) $\int \frac{1}{(2 - h)^{100}} dh$

(d) $\int \sec(3x - 8) \tan(3x - 8) dx$

(e) $\int \frac{e^x}{e^{8x}} dx$

(f) $\int \tan(t) \cos(t) \csc(t) dt$

(g) $\int \frac{1 - \cos^2(7x)}{\sin(7x)} dx$