ASSIGNMENT 1   **MATHEMATICS 1001**   WINTER 2023

Due: Monday, January 23rd, 2023 at 11:59pm. See the Gradescope Handout for submission information.

> **Note:** You should complete the WebAssign problem set "Elementary Indefinite Integrals", as well as Worksheet 1.1, before you work on this assignment.

1. Evaluate the following indefinite integrals.

   (a) $\displaystyle \int \frac{(2x-1)(x^2+3)}{x^2}\,dx$

   (b) $\displaystyle \int \frac{\ln(x^5)}{\ln\left(\sqrt{x}\right)}\,dx$

   (c) $\displaystyle \int \sin(u)\cot(u)\sec(u)\,du$

   (d) $\displaystyle \int \left(\frac{x}{7}+8\right)^{20}\,dx$

   (e) $\displaystyle \int \frac{1}{(7x+8)^2}\,dx$

   (f) $\displaystyle \int \sec\left(\frac{3x+4}{6}\right)\tan\left(\frac{3x+4}{6}\right)\,dx$