Homework 1 **Due January 15, 2025**
Calculus II **Prof. Nollet**

Review Assignment:
Section 5.5 # 19, 21, 26, 31, 43, 48, 54, 55, 61, 65
Section 7.1 # 2, 5, 6, 10, 15, 20, 23, 25, 26

Most are integration u-substitution. Try to do them without the hints.

Hints:

Section 5.5:
21 $u = 1 + \sqrt{x}$.
26 $u = \tan \frac{x}{2}$.
31 $u = 2t + 1$ or $u = \cos(2t + 1)$.
#43 Set $u = x - 1$. Note that you will have to express x in terms of u.
#48 try $u = x^3 + 1$. You will have to write the leftover x^3 in terms of u.
#54 $u = 1 + e^{1/x}$.
#55 $u = \ln x$.
#61 $u = \sin^{-1} x$.
#65 $u = \tan^{-1} y$.

Section 7.1:
#2 $u = 3x - 2$.
#5 $u = 6 + 3 \tan t$.
#6 $u = 2 + \sec y$.
10 $u = x + 1$.
#15 $u = \sqrt{r}$.
20 $u = -1/x^2$.
23 $u = e^v$.
#25 $u = 1 + e^x$.
#26 Multiply top and bottom by e^{-x}, then similar to # 25.