Homework 11 **Due March 10, 2026**
Calculus II **Prof. Nollet**

A. Find FORM of partial fractions for $\dfrac{3}{x^4(x-1)^3}$.

B. Find FORM of partial fractions for $\dfrac{10}{(x^2+1)^2(x^2-1)^2}$.

C. Find FORM of partial fractions for $\dfrac{2}{x^3(x^2+3x+3)^2(x^2+3x+2)}$.

Section 8.4 #13, 16, 19, 20, 22, 23, 29.

Hints:
A. Straightforward. How many constants should you have?
B. Notice that x^2+1 does NOT factor, while (x^1-1) DOES factor, so you must treat those two differently.
C. Notice that of x^2+3x+3 and x^2+3x+2, one factors and the other does not.
#13. Straightforward. Answer in back of book is wrong.
#16. Straightforward.
#19. How many constants should you have?
#20. A lot like #19, but easier.
#22. Should have 3 constants, one irreducible quadratic, one linear term.
#23. Need 4 constants.
#29. Need 4 constants, integrals at the end are easy.