

**Homework 13**  
**Calculus II**

**Due March 24, 2026**  
**Prof. Nollet**

Section 8.7 #2, 9, 14, 17, 20, 33, 72, 77 and

A. Evaluate the integral  $\int_3^{\infty} \frac{dx}{(x^2 - 1)(x^2 - 4)}$ .

Hints:

#2. Use Example 3 in the book.

#9. Easy partial fractions.

#14. Trig substitution.

#17. Set  $u = x^2$ .

#20. Set  $u = \arctan x$

#33. Easy partial fraction.

#72. Integration by parts to find  $M_y$ .

#77. You can use Example 3 in text to do all three parts.

A. Longer partial fractions. Organize logarithms to understand the limit.