

408L CLASS PROBLEMS

FEBRUARY 19TH, 2020

First, go through the problems below and use substitution to reduce the integral to a trigonometric integral. After you have done so for all of the problems, go back and solve the integrals you set up.

Problem 1. Find $\int \frac{x}{\sqrt{1+x^2}} dx$.

Problem 2. Find $\int \frac{\sqrt{x^2-1}}{x^3} dx$.

Problem 3. Find $\int \frac{\sqrt{1-x^2}}{x} dx$.

Problem 4. Find $\int \sqrt{1+x^2} dx$.