

MATH 205: Homework 2

Due Wednesday Oct 11

Problems are from Boller and Sally. I recommend at least thinking about all the exercises, even if they are not assigned, as you read through the textbook. I also recommend trying to prove all the Theorems which are left unproven in the book.

Problem 1. Exercises 5.8.3, 5.8.4, 5.8.5

Problem 2. Exercises 5.9.4, 5.9.8, 5.9.16, 5.9.15

Problem 3. Write down an iterated integral to compute the volume of the following region Ω in \mathbb{R}^3 : Ω is the region of the cylinder $x^2 + y^2 < 1$ in between the planes $z = 1$ and $z = \frac{1}{2}(x + y)$.