

MATH 541, FALL 2023, HOMEWORK 7

Due Saturday, October 28, 2023 at 5pm Eastern time on Gradescope. Solve the following exercises:

Problem 1. Lawler, exercise 5.1.

Problem 2. Lawler, exercise 5.2.

Problem 3. Let $\mu \in \mathbb{R}^2$, let Σ be a positive-definite 2×2 matrix, and let $(Y, Z) \sim N(\mu, \Sigma)$. Compute $\mathbb{E}[Y \mid Z]$.