## 520 SPRING 2025 PROBLEM SET #10

**Problem 1.** Show that there exists a compact genus 5 Riemann surface.

## Problem 2.

- (a) Determine all d such that there exists a degree d holomorphic map from the Riemann sphere to a compact genus one Riemann surface.
- (b) Determine all d such that there exists a degree d holomorphic map from a compact genus one Riemann surface to the Riemann sphere.