18.950/9501 (S20): HOMEWORK 8

The book references are to do Carmo, *Differential Geometry of Curves and Surfaces.* (The numbers for the assigned problems are the same in both editions of the book.)

Due: Friday, Apr 24, on Gradescope.[1]

Exercise 1. Chapter 4–4, Problem 14.

Exercise 2. Chapter 4–4, Problem 16. (Recall that a point $p \in S$ is *parabolic* if the differential of the Gauss map dN_p has eigenvalues 0 and $k \neq 0$. For example, every point on the surface $S = \{(x, y, y^2) \colon x, y \in \mathbb{R}\}$ is parabolic.)

Exercise 3. Chapter 4–4, Problem 17.

Exercise 4. Chapter 4–4, Problem 18.

Exercise 5. Chapter 4–4, Problem 20.

Exercise 6. Chapter 4–4, Problem 23.