Math 5200/6200 Short Project 01

Scan (or photograph) your work; email it to me before class on Wednesday Feb. 2; send your work to me as a pdf file whose name begins with your last name (e.g. smith_project_1). You may omit one of the following problems.

Problem 1. Find the limit point of the following set and prove that it is a limit point of the set:

$$M = \left\{ \frac{n^2 - 1}{3n^2 + 2} \mid n \in \mathbb{N} \right\}.$$

Problems 2 - 6. Prove theorems 1.8 through 1.12.