Math 869:Assignment 4

Due Friday April 18

Problem 1. Given a map $f : S^{2n} \longrightarrow S^{2n}$, show that there is some point $x \in S^{2n}$ such that $f(x) = x$ or $f(x) = -x$. Deduce that every map from the real projective space RP^{2n} to itself has a fixed point.

Problem 2. Solve Exercise 10 on page 156 of Hatcher's book.

Problem 3. Solve Exercise 22 on page 157 of Hatcher's book.

Problem 4. Solve Exercise 23 on page 157 of Hatcher's book.