Math 534B Homework 9.

Due 4/21

1) Prove that the Euler Characteristic is a topological invariant.

2) Show that the degree of a map is zero if the map is not surjective.

3) Show that if $f : S^n \to S^n$ has no fixed points, then the degree of f is $(-1)^{n+1}$.

4) Hatcher 2.2 Exercise 38

More practice:

Read the statement and proofs of Theorem 2.28, Prop. 2.29, and Prop. 2.30 (Explaining the diagram on p. 139 would make a good problem)