Exercise sheet 1

Manifolds, MTH406

- 1. For the sphere, S^2 , prove that:
 - (a) The stereographic projections from the north pole and south pole form an atlas.
 - (b) The
- 2. Prove that if X_p is a derivation at $p \in M$, then $X_p(c) = 0$ for any constant function c.