

Homework 5

- (1) (10 pts each) Guillemin and Pollack, Chapter 1, Section 5, Exercises 2, 9, 10; Chapter 1, Section 6, Exercises 1, 2, 3; Chapter 1, Section 7, Exercises 3, 5, 6, 15.
- (2) Let M be a manifold and $x \in M$. Given $v \in T_x M$, show that there exists a vector field X on M such that $X(x) = v$.