

MATH 555, HOMEWORK 2

TANGENT SPACES, DERIVATIVES AND IMMERSIONS

Due Thursday, 2/18

Reading. Read pg. 8–19 of Guillemin and Pollack.

Exercises.

- (1) Carefully prove that our definition of derivative of a map between manifolds is independent of the two choices of local parameterizations.
- (2) Do exercise 4 on page 12
- (3) Do exercise 2 on page 18.
- (4) Do exercise 4 on page 18.