

Typically reading assignments expect only a superficial understanding of the material. They are intended to give you a first look at material we'll explore in more depth in class. Occasionally, however, you will be asked to thoroughly understand something from the reading which we will not go through in class.

Most of the readings are from Bonahon, some are from Schwartz and sometimes you are asked to read online materials. Answer the following questions and turn in on the due date. The questions are intended to help you focus on what you are expected to get out of the reading and to ensure you are prepared for class. Your answers need not be long, but they should be thoughtful.

(1) Schwartz 2.7 - 2.8, 3.1 - 3.4

- (a) What is a surface? Give some examples as well.
- (b) What is an n -dimensional manifold. Give an example with $n \geq 3$.
- (c) Do Exercise 3, page 34. You do not need to give complete details for the part where you are to show the quotient space is homeomorphic to S^2 .
- (d) Do Exercise 6, page 34. You do not need to prove that you have an equivalence relation and that the quotient is homeomorphic to the sphere - but it had better be!
- (e) What is the euler characteristic and genus of a surface?
- (f) Explain the statement of Theorem 3.1 (page 37).