

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) Bonahon Chapters 7.1 and 7.2 **not including** the proofs.
 - (a) What is a **group action** on a set X ?
 - (b) What is the definition of the **orbit space** of the action of a group Γ on a metric space X ?
 - (c) What does it mean for a group action to be discontinuous?