

Name: Daniel Sinderson

*Please fill out this form, save it as a PDF, and upload it to Moodle.*

**My goals for this week were to:**

Read and work through examples of adjunctions in my books and TeX up the definition (adding in explanations of free and forgetful functors). I also wanted to TeX up some more minor definitions that I had previously skipped: epimorphisms and monomorphisms, and full and faithful functors. And to take a look at representable functors and the Yoneda lemma again.

**I made the following progress on these:**

Things were hectic this week so I got less done than I wanted. I did TeX up definitions for epimorphisms and monomorphisms, as well as for various kinds of functors: full, faithful, injective on objects, and essentially surjective on objects. I finished about half of the definition of an adjunction before realizing there was some of the concept I don't fully understand yet, but to understand them I'd need to be more comfortable with representable functors. I went back to them yesterday and they're starting to make sense now.

I also did some planning for the paper (and maybe the presentation) by thinking through what examples I'd like to use for the different topics.

**I have the following questions and concerns I want to discuss with my capstone advisor:**

Despite my slower week I think I'm still making good progress. I might ask Dr. Menendez to walk me through adjunctions though.

**Some tentative goals for the coming week are:**

1. Understand the Yoneda lemma.
2. Understand adjunctions.
3. Figure out how to TeX commutative diagrams and start adding them to the definitions.