

Project Instructions

Overview

In these first few weeks of the course, we have studied many different topics that fall under the umbrella of “mathematical thinking”. In the later part of this course you will research two topics independently. For these topics, you will write a short essay describing a topic of your choice and explain how it relates to mathematical thinking.

Topic

I am leaving the choice of topic fairly open ended so that you can pursue whatever interests you the most. One option is to choose a topic we have already discussed in class and delve farther into it. Another is to look at my list of topic ideas posted on our website. Or you could do something I did not think of but that you think would make a good mathematical thinking project. In any case, I am happy to help you choose a topic that will lead to a successful project with lots of resources to draw from.

Structure

As a first step, you will do some research to make sure your topic is viable and that you will have good resources to learn about it from. I am happy to help you with this process and in many cases will already know of some good resources to look at. After doing this research you will hand in a topic proposal which consists of a paragraph or two on your choice of topic and what you plan to explore in your report.

You will then later hand in the project report, an essay that I would imagine being something like a 3-7 page essay on your topic. Your project report should be written for an audience of your peers. In particular, any specialized knowledge needed for your chosen topic should be discussed in terms which are understandable to your classmates. Between the deadlines for the topic proposal and the project report, you will submit a draft of your report for peer review. Specifically, you will be assigned a partner from your class and you will exchange drafts to look over. You will be given a worksheet for delivering helpful feedback to your partner, and then you will use their feedback to revise your draft. The peer review process is taken seriously and you should evaluate yourself for authentically engaging in the review process just like any other assignment. You should evaluate your project report on several factors, including essay structure, mathematical accuracy, clarity of exposition, use of mathematical thinking, and appropriate citations.

The last two weeks of class will be devoted to student presentations on one of the two topics they did a project for. We will discuss these more when we get closer but the general idea is that you will design an engaging presentation to teach us all about your chosen topic.

Important dates

- (1) Friday, March 12: Project assigned.
- (2) Friday, March 19: First project proposals due.
- (3) Sunday, March 28: First draft for peer revision due.
- (4) Tuesday, March 30: Peer feedback in class.
- (5) Tuesday, April 6: First project report due.

- (6) Monday, April 12: Second project proposal due.
- (7) Tuesday, April 20: Second project first draft due.
- (8) Thursday, April 22: Peer feedback in class.
- (9) Tuesday, April 27: Second project report due.
- (10) Tuesday, April 27: Project presentations start during class.