

The topic of my project is going to be on Fair Division: the Last-Diminsher Method (Banach-Knaster Proportional Procedure for Four or More Players). I plan to create an educational video that will describe and show how this method works. The last-diminsher method is typically explained using the visual of a cake being divided among a group of people. The video would show this cake-dividing procedure, and every step, specifically, that needs to happen for the last-diminsher method to be accomplished.

The materials that would be necessary to create this project are a video camera, an editing program, willing "actors", a trip-pod, and a cake. I am going to take advantage of the Computer Lab Macs and use their iMovie editing program. I have everything else I need.

Being a visual learner myself, I understand how difficult it is, for many people, to read a concept, especially about math, and understand it. Visual representations of equations and mathematical procedures are almost essential for a better and easier understanding of the material. My goal for this video is for it to be an important aid that math teachers can use when teaching about Fair Division and the Last-Diminsher Method.

The research paper will have more of a focus on how and why this method was created, how it has been used, practically, in the past, and how it is being used presently. In a nut shell, the research paper would explain how the Last-Diminsher Method works and the purpose that it serves.

My math teacher will be my primary consultant when it comes to assessing the major points and objectives that the film needs to cover. She will also be in charge of making sure that my research paper is accurate, well written, and has appropriate citations. I am responsible for coming up with a time line for myself, so that I get everything complete on time.

Honors Project Timeline

Step#1: START (2/20)

- get film equipment, background, and actors set up
- make the storyboard for the video
- study sources and make an outline for the research paper

MEETING WITH ADVISOR: 3/2

Step#2:

- start filming
- start writing the paper and make a rough draft
- Make poster idea for project

MEETING WITH ADVISOR: 3/23

Step#3:

- Complete filming
- Start editing
- Revise paper
- Prepare poster for the project

MEETING WITH ADVISOR: 4/6

Step#4: POSTER PRESENTATION (4/19)

Step#5:

- Complete editing
- Complete paper

FINAL MEETING WITH ADVISOR: 4/20

Step#6: END (4/30)

- Make any suggested changes to research paper
- Submit research paper and video