For your second talk, you should present a research paper on a more advanced topic in Discrete math. I encourage you to choose a paper related to your first talk in some way, though this is not required. Some parameters for these talks are listed below. Good luck!

- You should aim to take about 20 minutes for your talk. After 22 minutes, I will stand up to indicate that you are low on time, and after 23 minutes I will cut you off. Please plan your talks accordingly. I recommend making your talk somewhat flexible by adding some optional material somewhere in the second half of the talk.

- You may use the blackboard or the projector. Both mediums have advantages and disadvantages, though I recommend using the board by default.

- As in the first talk, there should be an emphasis on theorems, examples, and applications.

- You should avoid writing proofs or even proof sketches, but you should share proof ideas. Rather than giving the details of the proof, you should arm your audience with enough ideas that they are ready to read the proof on their own time. (On the other hand, don’t be disappointed when no one else reads the paper.)

- Choose your examples carefully! Typically, I would recommend presenting exactly two examples. One example should be the simplest “non-trivial” illustration of a theorem. It should be simple enough to present quickly and transparently, but just complex enough to make the theorem convincing. The other example ought to be something of independent interest.

- Give context for the theorem. Usually a theorem is discovered with a certain example or application in mind. The historical development that led to the discovery of a theorem is often worth discussing. Usually context appears in the introduction of a paper, but many papers do not give much discussion because they assume their audience is familiar enough with the subject. If you are having difficulty with this part, please let me know ahead of time. Providing context will be more significant on the third talk.