Math 401: Cryptology
Final Presentation

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You will each be required to give a roughly fifteen minute presentation in class on a cryptology topic of your choice. The goals of this assignment are:

- To give you an oppotunity to explore a single advanced topic in some detail;

- To provide the class with information on a variety of topics, and exposure to a variety of perspectives;

- To practice presenting technical information to an audience.

Consequently, your talk should

- Be on an approved cryptologic topic.

- Explain what mathematical ideas underly your topic. (Do not get lost doo deeply in technical details; but you should understand two layers deeper than you explain in your talk, and make it clear in your presentation that you understand the details).

- Relate your topic to how cryptography is used. Explain why someone who is uninterested in the technical background but who cares about cryptography should care about this topic.

Your talk may be on a topic that requires background not everyone in the class has; it is your job to make your topic accessible to a lay audience. I encourage you to do work on topics that involve material from other math or possibly CS courses you have taken as background.

Your presentation is worth 30% of your final grade in the course. Your grade on the presentation will be allocated:

- 10% for submitting notes and slides to me the Thursday **before** your scheduled talk, and a second draft by the day before your scheduled talk;

- 10% for my evaluation of your talk, according to a rubric I will hand out;

- 10% for the evaluation of your talk by your fellow students according to the same rubric.

Rubric:

1. Time management

   You have a fifteen-minute slot for your presentation. Your presentation should be at least twelve minutes long, but no longer than fifteen minutes. Manage your time so you can spend an appropriate amount of time on each topic, without rushing or stalling.

2. Context and Motivation

   Provide context for your talk. Explain why you care about the topic, and why your audience should care. How does it connect to other mathematical ideas? What applications does it have? Who uses this result?

3. Narrative

   Make sure your talk tells a story, rather than being a disconnected set of facts. Give a clear introduction explaining what youre talking about. Conclude by reminding us what we should take away from the talk. Dont get lost in the details of a technical argument, but stay focused on the overall message of your presentation.

4. Audience Engagement

   Stay connected to your audience. Project and speak to your audience; look at your audience and make eye contact. Don't stare at your slides, or read them verbatim. Have a fluid delivery; consider rehearsing what you're going to say.

5. Clean slides

   Have well-orgainzed, easy-to-read slides. Don't make them too crowded, but do include pertinent information. Don't leave major editing or typographical errors in your slides. Typeset mathematics cleanly.

6. Organization

   Organize your presentation in a logical manner so your audience can follow it. Signpost clearly so we know what you're doing and where you're going. Present information in a logical sequence so you don't have to double back or repeat yourself.

7. Correct mathematical content

   The mathematics in your presentation should be complete and correct. Don't say false things. Do know the math behind your talk; the fact that you shouldn't give all the details of a proof does not mean you shouldn't understand it. Answer questions in a clear and informed manner.

8. Overall Impact

   A catchall category for my more subjective impressions.