

This document contains tips and instructions for giving a talk in the “polynomial method” class. These are my own opinions, and it is OK if you do not agree with some of those. Moreover, most of these tips have exceptions for them.

1. A common beginner’s mistake is to have a talk that is one long technical proof. Doing this usually gets most of the audience to stop listening after a few minutes. Instead, you should start by trying to get the audience interested in the problem, and give some very basic intuition about it. In addition to presenting the problem, you can give examples, some motivation, related problems, history, etc. In some cases it is fine if you spend half of your talk only about these things.
2. If your paper consists of an elegant proof that is not too long, it’s nice to present the full proof. However, this is not the case for most papers, and usually there is no reasonable way of presenting the entire paper in a one-hour talk (and if you do try to do this, you go very fast and lose the audience). Instead, try to describe the general strategy of the proof, give some intuition about why this strategy works, and give the full details of selected parts of the proof. It is a good idea to say something like “this lemma is just a long straightforward calculation, so we will skip it” or “the proof of this lemma is based on advanced differential geometry, which will take too long to explain here”. You are required to understand the parts that you skip (or ask me if it’s OK to skip them), and people may ask questions about what you choose to skip.
3. **Practice your talk in advance!!!** It is extremely helpful it is to give the talk at least once before. You can present it to a friend, but it is even better if you do it on your own. You’ll find that you’re not sure how to explain some points when it’s out loud, and not just in your head (and then you have the time to think about how to explain these properly). You’ll notice that some things that you planned to say sound bad and decide to skip them in the actual talk. And more...
4. Your talk is aimed for the average student of our class, and the level should be according to that. There is no need to introduce tools and definitions that we often use, such as partitioning polynomials or the distinct distances problem (it’s never bad to repeat basic definitions, as long as you have enough time for the main part). When using tools and definitions that we mentioned only once or twice, give at least a quick reminder.
5. If you like, you are welcome to use a computer presentation. However, it is more difficult and requires more experience to give a good talk when using a presentation. You have to be careful not to go too fast, not to have slides that contain a large amount of text (which then no one will read), to remember that the audience does not have the definitions from the previous slides in front of it, etc. If you are using slides, please check in advance that your computer can connect to the projector (or email me in advance for help with this).
6. You can find many more tips on giving talks online (including many tips that contradict each other and this document).
7. If you like, you are encouraged to include jokes, riddles, rap segments, etc.