

**MA40238 NUMBER THEORY 2014/15 SEMESTER 1
INFORMAL QUESTIONNAIRE FEEDBACK
(HALLOWEEN EDITION)**

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BIG THANKS

Thank everyone who filled out the questionnaire! Your comments will be very helpful to make the rest of the course better. Further comments are always welcome at any time!

THINGS I WILL BE HAPPY TO CHANGE

Speak more slowly and clearly. Thanks. I will try.

Write larger and more clearly. Thanks. It is trickier to write on a board than on a piece of paper. But I will remember to write larger and make my handwriting readable.

Do not use the boundary area of the boards. I see. People sitting on either side of the front row might not see the other side of the boards clearly. I will try to use the space which is relatively central, but I will be grateful if people can avoid the bad seats in the front row to maximise the board space I can use.

Keep board work organised and avoid using random spaces. Thanks. I will keep my board work in order.

Do not start long proofs near the end of lectures. Thanks. This is a good suggestion. I will try to allow sufficient time for long proofs (if there is any).

More overall summaries of topics. Good idea! At the beginning of lectures I usually summarise definitions and results that I will be using. Starting from this week I will also provide a weekly overview (if I think necessary) to give you a clearer big picture of the material covered in lectures. If you would like to see other information being included in this overview, please feel free to let me know.

More audience participations. Thanks. I will try harder, and you should also try harder. This is not only my lecture but also your lecture. So stay active in lectures!

Make problem sheets easier and shorter. / Problem sheets are just right. / Problem sheets seem too basic. Based on your mathematical background, you have very different opinions towards the problem sheets. This is a very typical situation in a large class consisting of

people in different years and programs. I think a unified solution to this issue is to provide extra hints (as what I have been doing for Sheet 5). I encourage you to work on the problems without looking at the extra hints first. But if you really have difficulties with some of the problems, the extra hints could be useful. In this way everyone can get some practice by working on the exercises. But remember: struggling with some difficult problems is very helpful to boost your understanding of new material in every area of mathematics. Do not be scared of a hard problem and give up your own chance of such a boost! Again, you can always discuss with your classmates, look up something similar in various books, or ask me for more help.

THINGS I PREFER NOT TO CHANGE

Number theorems, propositions, etc in lectures. I prefer not to do so because we already have a numbering system in the lecture notes, and it might cause confusion if we use a different system in lectures. So far I do not see any issue from not numbering the results in lectures. Most of the time we can refer to a result by its name, or its content if it does not have a proper name.

Write full sentences and complete proofs instead of just key words. I deliberately write short phrases instead of full sentences in lectures. There are three reasons for doing that. First of all, this is a way to highlight the main flow of the proof. Key ideas are less likely to be submerged in technical details, which should be helpful to people who just see the proof for the first time. Secondly, this is a way to encourage active thinking. When you see key words instead of full sentences in your notes, you can ask yourself many small questions, which help you think things through and build up your own competence in dealing with similar situations. Eventually this will help you remember the proofs or solutions more easily. Lastly, in case you do want to read a full proof, you can always find it in the lecture notes available on the webpage.

Slow down the pace and spend more time on each topic. I understand that it is not everyone who can understand everything in lectures immediately. It is absolutely normal. In fact, I think very few people can fully understand a mathematical proof when they hear others talking about it for the first time. But learning a subject is not only about attending lectures. And this is precisely the reason why we need exercise sheets, office hours, etc. You do not need to panic if something confuses you. But you do need to spend some time every week to make sure all the confusions are resolved instead of accumulated. On the other hand, we have unfortunately very limited lecture time, so I have to keep the lectures moving forward at a certain pace. In the long run, I want everyone who is engaged in this class to feel that he/she really learned something interesting instead of spending a whole semester of time on very few topics.

Free cake in exercise classes. Good idea! Unfortunately, as far as I understand, this is a violation of the university regulation. But I might consider bringing snacks or sweets or drinks or even (rarely) cakes for office hours on a random basis (if the department allows me to do that) to encourage participation in office hours. Pop up from time to time to enjoy some (free) refreshments in late afternoons! You are welcome to contribute by asking a mathematical question which you find mysterious. Happy Halloween!