

MATH1050 Notes-compilation Exercise

1. Description of the task.

Compile a set of notes of your own, of **no less than 600 words and no more than 1800 words in English**, on exactly one of the themes below:

- (a) Natural numbers, integers and rational numbers.
- (b) Inequalities about real numbers and complex numbers.
- (c) Algebraic and geometric aspects of complex numbers.
- (d) The Mean-Value Theorem(s), and its/their consequences and applications.

The notes should reflect your understanding of your chosen theme, after a study of the course material covered in Lectures 1-20, and/or other material at an equivalent level, including material from MATH1010/MATH1018.

The text of the submitted work must be typed. (Handwritten work will not be accepted.)

2. Instructions.

- (a) You are required to submit your set of notes to ‘Veriguide’, and three further identical copies, **no later than 2359hrs 2nd May 2021**, respectively to:
 - i. the ‘blackboard’ item ‘Notes-compilation Exercise (Submission for Grader A)’,
 - ii. the ‘blackboard’ item ‘Notes-compilation Exercise (Submission for Grader B)’,
 - iii. the ‘blackboard’ item ‘Notes-compilation Exercise (Submission for Grader C)’.
- (b) You are allowed a maximum of three submissions to the ‘Blackboard’ prior to the submission deadline.
Only the last submission prior to the submission deadline will be graded.
- (c) There is a penalty on late ‘first submission’: if you are submitting your work on the N -th day after the submission deadline, your grade for this component will be subjected to a deduction of N subgrades.
- (d) **You must follow the instructions set out in the ‘Instructions on submission of work’.** See Section B (‘Typed work’) and Section C (‘Electronic submissions’) for detail.

3. You may be required to attend an interview for ascertaining that you are indeed the author of the submitted work.

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Frequently asked questions.

Below is a list of frequently asked questions for such an exercise. For their answers, refer to the Appendix.

1. What is an ideal submitted work (that might receive a ‘high grade’)?
2. How to interpret the word limits?
3. Will I be disadvantaged by my (not very good) English?
4. Are there any tips on what content to write?
5. How is the university guideline on academic honesty interpreted in this exercise?
6. Are there any tips on how to (quickly) compile a set of notes, or at least set up a framework?
7. Do I have to state every definition/theorem in full that I think related to the theme?
8. May I include pictures/diagrams in my work? Do I have to type them? How do they count in terms of ‘word limits’?
9. Am I obliged to use LaTeX?
10. May I approach the teacher/TA’s for help/advice? Will my submitted work be discriminated for my having received help/advice?

Appendix. Frequently asked questions.

1. What is an ideal submitted work (that might receive a ‘high grade’)?

- (a) An ideal submitted work is a piece of mathematical knowledge, with correct and well-organized content, digested by you and therefore belonging to you. It demonstrates what you have learnt on the theme you have chosen.
- (b) You are free to decide whether you aim at a greater breadth or a greater depth on the various topics you touch upon.
You are free to decide on which specific topics within your chosen theme you may want to say more.
But you certainly are not going to copy an entire set of handout (as you have to work within word limits).
- (c) Remember: A coherent and well-organized set of notes is rated more highly than a confusing set, no matter how much material the latter contains.

2. How to interpret the word limits?

- (a) The exercise is not a competition on who writes more words. The length of your set of notes has no direct relation with how good your set of notes is deemed.
- (b) The upper bound is meant to be reminder on when you should stop on any specific topic in your chosen theme.
(You can’t just copy down everything from every set of notes.)
- (c) The lower bound is meant to reminder on whether you have written too little overall.
- (d) Be aware that every word you write will count towards the word limit.
- (e) Each equality/inequality counts as one word.

3. Will I be disadvantaged by my (not very good) English?

- (a) This exercise is not intended for testing your proficiency in the English language.
- (b) Serious grammatical mistakes and spelling mistakes might be penalized, but only when they matter in the mathematical content of the notes.
- (c) You are encouraged to try (as best you can) to write complete sentences, for the purpose of making the mathematical content clear.

4. Are there any tips on what content to write?

- (a) You may quote anything (definitions, results, examples) from the course material (Hand-outs, Exercises et cetera) available at the course homepage.
- (b) You may provide, in your set of notes, proofs of results (or outline of proofs) that are not provided in the course material.
- (c) You may also incorporate your own work, such as your solution to specific problems in the Exercises, into your set of notes.

5. How is the university guideline on academic honesty interpreted in this exercise?

- (a) Original investigative work is NOT expected.
- (b) As long as you are quoting from course material, you are not required to ‘cite the source’. If you are quoting from material of another maths course, you should indicate which course.
- (c) If you are citing something from an ‘outside source’ (for instance, a book), you have to indicate the source (for instance, the title of the book and the relevant page of the book).
- (d) You are not expected to compile any bibliography.
- (e) Beyond the above, you are reminded to abide by the standard rules and practices on academic honesty. As stated in the ‘description of the task’, the work submitted is supposed to be a set of notes compiled by yourself.

You may be required to attend an interview for ascertaining that you are indeed the author of the submitted work.

6. Are there any tips on how to (quickly) compile a set of notes, or at least set up a framework?

(This applies if you are not choosing the theme ‘Mean-Value Theorem(s) ...’) You may try the procedure described below:

- (a) Visit course homepage.
- (b) Read the catalogue of the handouts. Look for items relevant to the theme you have chosen.
- (c) Click into ‘typed version’ of the handouts. (Don’t use the ‘visualizer version.’)
- (d) Skim the material. (Do not get bogged down by detail.)
- (e) Pinpoint various definitions and/or results and/or examples that you think are most relevant.
Make use of them to set up a framework for your set of notes on the theme.
- (f) Remember that direct quoting is allowed. Do exploit the ‘copy-and-paste’ method.
(This is not regarded as plagiarism in this exercise.)
- (g) Further look into the exercises to see whether something of interest may be incorporated.
Again make good use of ‘copy-and-paste’.
- (h) Beef up the content by including proofs/manipulations, or outlines of proofs/manipulations.

7. Do I have to state every definition/theorem in full that I think related to the theme?

- (a) You have to make your own judgement on which definition/theorem to be stated. This is the point of the exercise. (You will exceed the upper bound of the word limit very quickly without doing anything meaningful if you are just copying every definition/theorem that you think related to the theme.)
- (b) When you are stating a definition/theorem, you must state it correctly, as if you were asked to state it in a written examination. This is also the point of the exercise.

8. May I include pictures/diagrams in my work? Do I have to type them? How do they count in terms of ‘word limits’?

- (a) You may include pictures/diagrams in your work, provided they are drawn by you and are relevant to the content. (You are not allowed to just do ‘copy-and-paste’ for pictures/diagrams.)
- (b) You do not have to type the pictures/diagrams. If these are genuine pictures/diagrams, they don’t count in the ‘word limits’.
- (c) If such pictures/diagrams are relevant to the content and make your work better, they will count in the grading of your work.

9. Am I obliged to use LaTeX?

You are NOT obliged to work with LaTeX. However, you are encouraged to learn LaTeX, because it is easier to prepare a mathematical text with LaTeX than with WORD.

10. May I approach the teacher/TA’s for help/advice? Will my submitted work be discriminated for my having received help/advice?

You may ask for help/advice, but you must not ‘delay until the last minute’. It will be up to you to follow the suggestions given to you. Your work will not be discriminated for incorporating such suggestions from the teacher/TA’s.