

18.821: Mathematics Project Lab: Paper grading rubric

Each final draft gets two grades. The first relates to the mathematics and is a single grade for the entire team. It must be measured against what the team is capable of, given their background. It may include a component of improvement between successive papers.

The second relates to the writing, and is a separate grade for each team member. Each grade is a number.

There is also a grade on the first draft (for the entire team) and a grade on “process” (for individual team members).

Below is an attempt to characterize the meaning of grade points for these various sections. It doesn't pretend to be a complete list of what is expected. It is just intended to give a sense of the meaning of these numbers.

Mathematical vision: (Team grade)

50: Some meaningful phenomena are identified within the scope of the project description and given adequate mathematical explanation.

40: Meaningful phenomena are identified and explanations are suggested but are flawed or insufficient.

30: A good expository account of well known or superficial phenomena.

20: Description of meaningful phenomena is missing or absent; superficial account of standard material: little content.

Writing: (Individual grades) **Overall structure:**

10: All the components of the paper are in place and fulfill their functions; the structure of the paper is clear; it addresses a consistent audience.

8: Generally good but less than excellent in some of these dimensions.

6: Some components are wrongly focused or inadequately developed; organization of sections is illogical or inadequately explained; the level of writing is inconsistent.

4: Some components are missing; writing cannot be followed.

Paragraph level structure:

10: Paragraphs are coherent wholes; writing is concise and focused; ideas are introduced appropriately before being used.

8: Generally coherent writing but with occasional gaps, inconsistencies, or failures of motivation or conciseness.

6: Some paragraphs are unintelligible; referencing is inadequate.

4: The reader is often left puzzled about what the purpose of the text is.

Fine structure:

10: Mathematical language is appropriately used; nonstandard notation is introduced; displays are appropriate and correct; citations are correct and appropriate.

8: Occasional significant errors in usage or notation.

6: Most paragraphs exhibit errors in usage or notation.

4: Frequent significant errors in usage or notation, rendering parts of the paper incomprehensible; inadequate citations.

First draft: (Team grade)

10: Draft is complete and carefully written.

8: Main ideas and sections in place, but some elements sloppy or missing.

6: Components of the research are missing—mathematical analysis is inadequate or incorrect, writing or typesetting is flawed, or referencing is inadequate.

4: Substantial content missing, or serious defects of presentation.

Process: (Individual grades)

10: Attended all group meetings; contributed constructively to the work flow.

8: Adequate contributions but with fewer leadership qualities.

6: Missed meetings with the mentor; failed to carry out tasks in a team-centered way.

4: Missed the briefing; failed to carry out tasks.

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18.821 Project Laboratory in Mathematics
Spring 2013

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