

Math 300 Paper Rubric

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Your paper will be graded on the following rubric:

30 points **Style and Framing**

4 points: Title

The paper should have a clear title, give the name of the author and the author's college affiliation, and nothing else.

6 points: Abstract

A good paper should begin with an *abstract*, a 3-4 sentence sales pitch explaining what your paper covers and why one might be interested in it. A good abstract tells the reader what the main result or conclusion of your paper is; identifies the main tool or tools used to reach that conclusion; and gives some perspective on how this conclusion relates to other topics your reader may be interested in. Use the L^AT_EX “abstract” environment for this.

10 points: Framing material

Your paper should feature an introduction (and possibly conclusion), which at first blush seem to cover much the same ground as the abstract. The introduction should provide some context for your problem: either historical context (when was it first studied? When was the core problem solved?) or field context (how does this fit into the broader subject?) are reasonable.

When possible, results and conclusions should be related to topics which are at least one of

- Practically applicable (e.g. encryption)
- Interesting to a great many people (e.g. finding prime numbers, solving diophantine equations).

10 points: Writing style

Your paper should be well-organized, with transitions that flow from one section to the next. It should be free of obvious grammatical and spelling errors, and formatted legibly. (If the act of reading your paper is painful or unpleasant, this is where I can take points off).

30 points **Mathematical Content**

I will evaluate the mathematical content of your paper. I won't break this down into sub-topics with fixed numbers of points because different papers will have different

types of content in different ratios—for instance, some topics will require many definitions and some will require only one or two. I will be looking for a few things:

Your paper should contain enough definitions that a typical Math 300 student can follow the paper—even if they have not taken the relevant course.

Your paper should clearly state and prove a theorem. The primary content of the paper, and thus the primary thing to be graded, is the details of these proofs and computations. The math should be correct, be clearly stated, and display understanding of the details of the argument and the topic. Your argument should be clearly conveyed to the reader.

It is permissible—and generally fairly necessary—to use some results which you do *not* prove. Any such results should be clearly stated, and you should give a citation for where the reader can look up details of the result.