

## WRITING PROJECT DESCRIPTION M220, SPRING 2007 SECTION 901

**Basic Parameters.** The writing project will consist of a 5-10 page paper on a topic chosen by you, subject to approval by Professor Rowell. Examples of appropriate topics are: a major theorem (eg. Fermat's Last Theorem), a famous mathematician (eg. L. Euler), a substantial application of mathematics to other areas of science or a major unsolved problem in mathematics. If you are unsure if your topic is appropriate, ask Prof. Rowell. The paper need not contain proofs, but must contain substantial mathematical content. Your target audience should be your classmates, so *should be understandable to anyone with a basic mathematical knowledge*. Your paper must contain a bibliography consisting of sources cited in your paper, and include at least 2 **printed** works (that is, not an internet source like Wikipedia.org). Electronic-only sources are permitted, but should be kept to a minimum. As always, if in doubt, ask Prof. Rowell.

**Schedule and Point Values.** Your project is worth 15% of your grade, and will be scored out of 100 points.

- 2/20 Proposed topic due: February 20. Typed or handwritten, one paragraph describing the topic you plan to write about. Will be graded on content only. **15 points**.
- 3/6 Journal I due. Journal topic # 4 is an outline or detailed description of your paper. This does not count towards the 100 points, but is a major part of your first journal (which is worth 5% of your final grade). Graded on content only.
- 4/24 Final paper due. This should be typed, double-spaced and between 5 and 10 pages and will be graded on content and correct grammar, spelling and presentation. **85 points**.

**More Possible Topics.** The one topic that is explicitly excluded is **The Poincaré Conjecture**, as this is a journal topic. Some allowed topics:

- Any of the Millennium Prize problems (except The Poincaré Conjecture).
- Topological Quantum Computing
- Euler Characteristic
- Gödel's Incompleteness Theorems
- Continuum hypothesis
- four-color theorem
- Classification of finite groups
- Markov's theorem for braids
- Hilbert's Nullstellensatz
- infinite monkey theorem
- isoperimetric problem
- Jordan curve theorem
- Prime number theorem