

# MATH 205 WRITTEN ASSIGNMENTS Winter 2005

There are two written assignments, the first due February 28 and the second April 11. The first is a short essay about the Canadian mathematician John Charles Fields (3-6 pages, double spaced), counts as Quiz 3, and is weighted the same as each other quiz. The second is a medium length essay (8-15 pages) on a topic of your choosing. It is weighted 15% of the course grade. Many suggestions for suitable topics have already been given in the lectures, you may choose from these or select your own topic. Make sure to clear it with the instructor via email or discussion. Essays in English or French are fine, they can be typed or neatly handwritten. They can also be typed with the mathematical formulae done by hand, if that is more convenient.

The essays will be evaluated in several ways. Obvious ones are the presentation - there must be a cover page with title, author, course name and number. The essay must be stapled or bound in a folder. Spelling and grammar will be taken into account, as well as clarity of expression. Proper bibliographies and referencing must be present, you may use any system with which you are comfortable for this. Proper names must be spelled correctly, including accents and other diacritical marks (this applies also to quotes in other languages). Both essays should include many passages in the first person, e.g. "I find Fields to be very important in the development of Canadian mathematics because \_\_\_\_\_." In addition to obvious reference sources there is also considerable expertise right in the University of Calgary on many topics.

The essay may be mainly non-technical but can also include some mathematics. The evaluation will be based on the essay's interest, ideas, and argumentation. Your own ideas and opinions will also be welcome, e.g. "I believe the film 'A Beautiful Mind' based on the life of John Nash was a great (terrible) portrayal of this mathematician's life." Direct quotes from references are fine, but these should always be clearly indicated and should not comprise more than about 25% of the essay.

The short essay should include include some biographical material about Fields, and can also cover the Fields Institute in Toronto as well as the Fields Medals. In the long essay you have considerable freedom to write about any portions of your topic that are of interest to you. It will be graded somewhat more strictly than the short essay.

P. Zvengrowski

A Few Suggested References for John Charles Fields

[www-gap.dcs.st-and.ac.uk/history/Mathematics/Fields.html](http://www-gap.dcs.st-and.ac.uk/history/Mathematics/Fields.html)

[www.science.ca/scientists/scientistprofile.php?plD=284](http://www.science.ca/scientists/scientistprofile.php?plD=284)

[www.fields.utoronto.ca/aboutus](http://www.fields.utoronto.ca/aboutus)

<http://scidiv.bcc.ctc.edu/Math/FieldsMedal.html>

[www.icm2002.org.cn/general/prize/fmedal.htm](http://www.icm2002.org.cn/general/prize/fmedal.htm)

[www.cs.unb.ca/ alopex-o/math-faq/node47.html](http://www.cs.unb.ca/ alopex-o/math-faq/node47.html)

[www-groups.dcs.st-and.ac.uk/history/Mathematicians/Fields.html](http://www-groups.dcs.st-and.ac.uk/history/Mathematicians/Fields.html)

The Top Mathematicians Award, Florin Diacu,  $\pi$  in the Sky, Pacific Inst. Math. Sci., June 2001 (distributed in class)

Univ of Calgary Library has 3 books by Fields: FC51.C3496 NO. 87328 (Industrial Research in the US), 83518 (Science and Industry), 74220 (Universities, research, and brain waste). 3rd floor Libr. Tower Microfiche section