

EXTRA CREDIT #7 – MATH 311W

DRAFT DUE ON FRIDAY, DECEMBER 7TH
FINAL PAPER DUE ON FRIDAY, DECEMBER 14TH

For up to 6 points added to your homework score, you can write a 3-5 page paper on *ONE* of the following important questions in mathematics.

- (1) The Reimann hypothesis.
- (2) The Jacobian conjecture.
- (3) The Poincare conjecture.
- (4) Waring's problem.
- (5) P vs NP problem.
- (6) The 4 color problem.

When writing your paper, you *need* to explain the following:

- (a) What the conjecture is.
- (b) Who first made it (to the best of your ability), and when.
- (c) Has it been solved? What about special cases? And by whom?
- (d) A biography describing where you got your information.

You can also discuss various other related questions, as appropriate.

- (a) Would/did the solution to this problem have real world applications?
- (b) Are there any prizes associated to this problem? Either won in the past, or currently open?
- (c) Brief biographies of mathematicians that worked on this problem.
- (d) Whatever else you find interesting.

If your paper only has information that can be found on Wikipedia, you will not get any credit. If you do a good job, you will get 3-4 points. For more points, you must do an excellent job. If you fail to turn in a rough draft by Friday, December 7th, you will not get any credit. The final draft is due on Friday, December 14th.