MA 310 001, Spring 2011.

- Problem solving lunch, Monday, 12 noon Mathskeller.
- Problems #8 and 11, set 2.1 due Friday, 25 March 2011.
- Exam 2 on Wednesday, 30 March 2011. This exam will cover the problems in §1.3, 1.4 and 2.1.
- Assignment to write a problem set, final draft due 4 April 2011.

For the final draft, please keep in mind the following points. Not all suggestions will be appropriate for every standard.

- 1. Give letter code and number and the statement of the the standard that you choose.
- 2. Give between 8 and 15 problems for the final draft.
- 3. Your problems should begin with simple routine calculations and work towards developing a deeper understanding. Thus, you might begin by having students verify that a given number is the solution to the equation and work towards techniques to find solutions.
- 4. Write a variety of problems.
- 5. Consider including problems where there is no solution or a more than one solution. Thus the problem might read "Can you find a solution to ...?" or "One solution is ..., can you find others?"
- 6. Include questions where students must write a few sentences explaining their reasoning.
- 7. Solutions to problems are not needed. In general, you will not need to include additional explaining the purpose of a problem. However, if you are concerned that the intent of a problem might be misunderstood, a brief explanation might be helpful.
- Continue working on set 2.1.
- A problem for practice.

Suppose that $(a+2b)^n = \sum_{k=0}^n B_{n,k} a^k b^{n-k}$. Find a way to express the coefficients $B_{n,k}$, $k = 0 \dots, n$ and $n = 1, 2, \dots$ in terms of the coefficients $B_{n-1,k}$ for $k = 0, \dots, n-1$.

Use the binomial theorem to find a formula for $B_{n,k}$.

March 21, 2011