GRANDE PRAIRIE REGIONAL COLLEGE
MATH 1600
FALL 1999

Title: Higher Arithmetic

Prerequisite: Math 30

Schedule:

Lecture A2	T Th	8:30-10:00	J204
Seminar AS1	M	4:00-5:00	J202
Seminar AS2	M	2:30-3:30	J202

Instructor: Dallas Sawtell
Office C204
Phone 539-2989
e-mail sawtell@gprc.ab.ca

Textbooks: Musser and Burger, Mathematics of Elementary Teachers

Grading:

Worksheets	10%
Quizzes	15%
Project	10%
Midterm	26%
Final Exam	39%

Worksheets/Seminars: A worksheet will be given out that must be handed in by the end of the seminar for marking. The projects will also be presented in the seminar starting November 6.

Quizzes: Quizzes will be held every Tuesday during the last half hour of class. Quizzes can not be made up if missed.

Midterm: If the midterm is missed with a good reason, the weight will be put on the final (ie. the final will be worth 65%). A doctors note will be required. The midterm will be during class on Tuesday, October 24.

Calculators: Use of calculators is **not** permitted on the quizzes or exams.

Content: Selected topics in chapters 1 to 11, topic 2.

MA1600 PROJECT
DUE: Thursday, Nov. 30/2000

In groups of 2 to 4 you have to :
1) Gather a few good problems (4 or 5)
2) Solve them
3) Transform them into something suitable for students in grade K-6
4) Create a tabletop display for one of the problems
5) Write a report

Criteria for the problems:
1) The problem presented should be interesting and do-able (see hints and suggestions below). It must be interactive/hands-on in nature or you must transform it into such.
2) The problem should be of a type that can be set up in a display

Hints and suggestions:
1) Make the display large and clear. Avoid great long tracts of printing. Ie. it shouldn't just be a poster. You can explain the problem verbally.
2) There must be some manipulatives (puzzle pieces etc) involved. They should be suitable in size and durability for K-6.
3) Use familiar settings. Ie. you may have to change from imperial units to metric.
4) If a problem is too hard for elementary students then you may have to modify it:
   a) Remove "time limits". When a problem asks you to solve something in a certain number of steps you can instead ask the students to solve it in the least number of steps.
   b) Make the setting smaller or less complex. For example if the problem takes place on a checkerboard you may be able to make it more accessible to elementary students by using a 4x4 board instead of an 8x8.
   c) You may need to make different modifications for different grades.

The report:
The report should have four components:
1) A title page including the title of the problem you will be presenting and the list of everyone in the project.
2) Write about the problem presented:
   a) Give the problem in its original form and cite the source (can point to a bibliography).
   b) Give the solution of the original problem.
   c) Give the problem in the form it was presented
   d) Explain how it was modified for the presentations (mention if there were different modifications for different grades).
   e) List anything you may do differently next time (ie. after the presentation)
3) Give the other problems (cite the sources) and their solutions.
4) The bibliography.