

**MA 416**  
**Homework #2**  
**Due Friday, February 2**

1. Exercise 3.1-13 in the book.
2. Exercise 3.2-2 in the book.
3. Exercise 3.2-6abc in the book.
4. Formulate the MacPhail Problem using the “input-output” method and solve it using Excel. Your solution should include:
  - (a) A list and description of your variables.
  - (b) A list of your resources, including units.
  - (c) For each variable, a summary of resources consumed and resources produced.
  - (d) A copy of your spreadsheet, including the solution and sensitivity analysis (I don’t yet know how awkward this will be to print!).
  - (e) A summary report for the Farmer MacPhail, explaining in narrative style what course of action he should take. You do not have to make a complete report on all of your sensitivity analysis, but you should make a strategic selection of significant items to comment on. Again, you do not need to provide the mathematical justification of your answers in this report. The report should be typed, single-spaced, and no more than one page long.