Due: Wednesday, February 22nd (at the start of class)

References are to the course textbook, except as noted.

Reminders

Enjoy spring break (February 13th-17th).

The first midterm exam will take place on Monday, February 27th.

Reading

For Monday, February 6th, Sections 4.5 and 4.6.

For Wednesday, February 8th, Chapter 6.

For Monday, February 20th, Chapter 8.

For Wednesday, February 22nd, Chapter 7.

Assignment exercises to hand in

Questions 1 and 2 must be solved in a spreadsheet, and must include be accompanied by well-written solutions. Please submit your answers directly to the teaching assistant by e-mail (`tyusun` at `sfu` dot `ca`). All file names should begin: `math_208W_1171_name_hw3_q1` (or `q2`, `q3`, `q4`) where `name` is your family name. (Note the format has changed slightly since the previous assignment.) Submit one .pdf and one Excel file per question in a single e-mail. If you prefer, you may submit a single .pdf file for the 3 questions.

1. Exercise 4.18.

2. Exercise 6.8.

Question 3 requires detailed written answers, typeset in LaTeX. You should also provide details of how you solved the problems, by spreadsheet or other means.

3. Case 11.3 from Hillier and Lieberman's "Additional Cases".

4. By now you should have chosen an interesting article that describes an application of operations research. You will write a brief summary of the article. The summary that you will produce should be at most 1200 words and fit on two pages (one double sided page) using reasonable margins and an 11- or 12-point font. It should describe the contents of the article **in your own words**.

Your essay should be clearly organized, and should address the following issues:

1. What real-world problem is treated in the paper?
2. What type of mathematical (Operations Research) model is proposed to solve the problem?
3. What mathematical tools are used to solve the model? How well is it solved?
4. What are the limitations of the model?
5. How has the solution been implemented? What is the impact of the implementation?
6. What are possible future directions for this work? For instance, can the model be improved? Can it be applied elsewhere?

Particularly on points 4 and 6, you are encouraged to go beyond the contents of the paper, and include your own critical analysis.

A draft grading rubric is summarized on the back of this page to help guide your writing process.

Some other exercises you should try

Additional exercises from Chapters 4 and 6.

Draft grading rubric for article summary:

The problem is correctly identified and clearly presented. (15%)	
The mathematical model is identified, including descriptions of key variables (input) and predictions (outputs). (15%)	
There is a high-level explanation of how the model is solved. (10%)	
Limitations of the model (i.e. critical, and perhaps debatable assumptions) are explained. (15%)	
The implementation and impact are discussed. (10%)	
Recommendations for improvements and further work are proposed and worthwhile. (10%)	
Ideas are presented clearly and logically. (15%)	
Few grammatical, spelling and punctuation errors. (5%)	
The paper is well-formatted, including references. (5%)	