

This problem set is due on Mon 16 October 2006 at the start of class 8:30 AM. Please turn in a hard copy of your answers (only printed – no handwritten solutions, please).

## Instructions

There are five total problems. Please submit a single Word document that answers each of the problems (and all of their sub questions) clearly, concisely, and completely.

The format for the Word document is as follows:

- Font: Times New Roman, 12 point
- Margins: 1”
- Single spaced
- Make sure team members are listed on the first
- Number each page on top right corner

If you wish, you may attach a printed out copy of a sampling of your supporting spreadsheet formulas (use the Ctrl-` key to show all formulas). Additionally, you may post your supporting spreadsheet to the class website under the appropriate homework assignment. For all files posted to the website, please use the following naming convention for the file and posting so that we can identify the authors: LastName\_FirstName\_PS#.xls with each tab named for the specific question.

Please make it easy for Tony to understand what you were trying to do.

Good luck in deterministic inventory planning!

Chris

## Problem Set 2

**Textbook Problems.** Answer Problems 5.1, 5.3, 5.4, and 5.21 SPP.

**Case Problem.** You are the Inventory Manager for about 3,700 individual SKUs. The items are reasonably homogeneous; each SKU has a unit value of about \$5, plus or minus \$1. The usage rate for each item is about 6000 units per year, plus or minus 10%. Demand for these items is stable and stationary; no volume discounts are available. Your current procedures involve an annual holding cost of 18%. Current purchasing practices result in ordering costs of about \$50 per order without regard to order size.

You are considering the implementation of a more "web-based" ordering system which should reduce your actual ordering costs to about \$5 per order placed, no matter how many orders you place.

- A. How much would you be willing to pay to implement this new ordering system?
- B. How confident are you in this estimate? Explain and quantify your answer.
- C. Suppose you could actually reduce the ordering cost to \$0.05 per order. Now how much would you be willing to pay for the new system?