IE 375 Comments on Homework #1

Homework 1 statistics:

Average: 2.52 (out of 2, with bonus 3), Standard Deviation: 0.67

Grade	3	2	1	0
# of people	25	15	1	1

Question 1

Comments regarding your performance:

- In question 1-35 *part a*, many of you did not change the unit cost from $20 to $26. Please read the homework carefully and make the necessary changes that are clearly stated in the text. This problem is also valid for question 1-35 *part c*. Since not changing the numbers indicates a lack of focus and reading ability, those received at most 1 point from the question even if the remaining analyses were completely true.
- In question 1-35 *part b*, some stated that the revenue is equal to the initial investment of $30,000. However, revenue is not equal to profit. Please read the relevant text to understand the terms revenue and profit.
- In question 1-36, some used the sum of geometric series whereas some used the sum of increasing demands each year. Two of them are acceptable, but few students considered $100(1+40\%)^{n} = 509$, where n is the number of years to recoup the initial investment. However, this formulation does not consider the sum of increasing demands each year. It offers in which year the break-even volume will be reached (i.e. in which year the demand will be 509). However, we try to find out when the sum of each year's demand will be equal to the break even volume.
- In question 1-36, some rounded up the number of years required to recoup the initial investment, whereas some did not round. Both versions are accepted.

Grade	**2**	**1**	**0**
# of people	**27**	**14**	**1**

Question 2

Comments regarding your performance:

- In *part a*, some wrote only the values of k and a without showing any derivation. Please note that you cannot receive partial grades by writing only the numbers. On the other hand, you may receive full points by writing the analyses although the numbers are not correct.

- In *part c*, many of you stated that the yearly production will be 15,000*365 without saying the reason. The reason is that the optimal production level in *part b* exceeds the capacity limit; therefore we produce with full capacity.

Grade	**2**	**1**	**0**
# of people	**37**	**3**	**2**

Question 3

Comments regarding your performance:

- Most of you did a great job in this question. Thanks! All calculations were correct. Additionally, you wrote the formulae at each step. This is an act that makes us happy because you can take partial points when you write the formulae even if your calculations are mistaken. Another good point is that most of you attempted to comment on MAD, MSE, and MAPE. Please, always try to solve all the homework questions.

Grade	**2**	**1**	**0**
# of people	**40**	**1**	**1**

General Comment

1- To receive full points, I strongly recommend that you write the formulae before making the calculations since it is very likely that you make errors while dealing with the numbers. Unless you write the formulae at the beginning, incorrect numbers will indicate that you use an incorrect formula, thereby reducing your points from the homework.