

E370 B Spring 2004-05  
In Lab Examination One

Statement of Academic Integrity:

"I swear that I have neither given nor received assistance on this exam and that I will not discuss this exam until all sections have completed it, that is until 1:10 PM on Friday, March 1, 2005."

I have read and agree with the statement.

Signature: \_\_\_\_\_

Instructions

1. Answer the questions in the spaces provided on the exam. Do not provide computer output unless it is required. Because this exam is multiple pages, be sure your name is on every page.
2. You must show your work and explanation to receive full credit. You must write any EXCEL functions used, with arguments, as well as the numerical output. For example,  $\text{NORMINV}(0.5,0,1)=0$ . Include (4) decimal places in your answer.
3. You may only use EXCEL for this exam.
4. Only the exam, pencils, erasers, and the formula cards may be on your desk. Put all the rest of your belongings along the wall or at the front of the room.
5. Remember, a student is to avoid even the appearance of cheating. Keep your eyes on your exam or on your computer screen. Any questionable behavior on your part is sufficient reason for me to confiscate your exam and ask you to leave the room.
6. The value of each question is given by each question. **Budget your time accordingly.**
7. When you are finished, you may turn in all pages of the exam and leave the room as soon as you are able to without disturbing your classmates.
8. Stay calm and do your best.



- d. Calculate the covariance between salary and age. Interpret. (5 points)
- e. Create a frequency distribution for **SAL** with a lower limit for the first class at 20 and a class interval of 140. Using this frequency distribution, estimate the mean, median, and mode of the variable **SAL**. (19 points)
- f. Estimate the standard deviation by using the frequency distribution from part e. (10 points)



3. The finance society at a college of business at a large state university would like to determine whether there is a relationship between a student's interest in finance and his or her ability in mathematics. A random sample of 200 students is selected and they are asked whether their interest in finance and ability in mathematics are low, average, or high. The results are as follows:

		Ability in Mathematics			
Interest in Finance	Low	Average	High	Total	
Low	60	15			
Average		35	10	60	
High		10	25		
Total	85		55		

- a. Complete the contingency table given above. (7 points)
- If a student is selected at random, what is the probability that he or she
- b. has a high interest in finance? (5 points)
- c. has an average interest in finance *or* an average ability in mathematics? (5 points)
- d. has a low *or* high interest in finance given he/she has an average ability in mathematics? (5 points)
- e. has a low interest in finance given he/she does not have a low ability in mathematics? (5 points)