Stat 160 Fall 2008
Assignment \#4

This assignment is due at the beginning of class on Tuesday, September 30, 2008. Late assignments will not be accepted. You must submit solutions to all required problems, answering them using complete sentences.

YOUR ASSIGNMENT MUST BE STAPLED AND PROBLEM NUMBERS CLEARLY LABELLED. UNSTAPLED ASSIGNMENTS WILL NOT BE ACCEPTED! DO NOT CROWD YOUR WORK. DO NOT WRITE IN MULTIPLE COLUMNS.

## 1. (TO BE SUBMITTED FOR GRADING)

Florida's population has shown steady growth for the past half-century. The following is a selection of population data obtained from Florida's Office of Economic \& Demographic Research. A scatterplot of this data clearly indicates a strong linear relationship between year and population.

Florida's Population for Selected Years, 1952-2002

| Year | Population |
| ---: | ---: |
| 1952 | $3,157,000$ |
| 1962 | $5,368,613$ |
| 1972 | $7,684,783$ |
| 1982 | $10,492,578$ |
| 1992 | $13,552,830$ |
| 2002 | $16,769,878$ |


(a) Determine the equation of the least-squares regression line. Include enough of your calculations to demonstrate that you are able to calculate $\bar{x}, s_{x}, \bar{y}, s_{y}$, and $r$ by hand.
(b) Based on your answer to (a), predict Florida's population for 2007.

## 2. (TO BE SUBMITTED FOR GRADING)

Chapter 5 Exercises pages 139-148

- \#5.32 and \#5.50


## 3. (TO BE SUBMITTED FOR GRADING)

Chapter 8 Exercises pages 207-212

- \#8.28 and \#8.46

