Statistics 10   Homework 1   Due 1/15/03
PART I. Textbook problems from Freedman, Pisani & Purves:
Chapter 2. Review Exercises: #7, #10 (pages 26)
Chapter 19 Exercise Set A: #1, #6 and Review Exercises #2, #12
(you may handwrite Part I, pen or pencil, doesn't matter)

PART II. An Essay question from Professor Lew
Maximum Length: One page, two if you are wordy (don't spend > hour on this OK?). This should be typed or a point will be deducted from your final score.
Guidance: This one is easy, but <u>required</u>. If you do the textbook problems above and fail to do this one, your homework assignment grade is an automatic maximum of 6/12 even if you got Part I above 100% correct. Be as creative or dull as you want to be. Do not get upset by the word "essay" instead, pretend you are writing an e-mail or chatting about what you have learned in the first two lectures of Statistics 10.
Goal: To help you understand statistical concepts by having you to apply them in real-life situations.
Your Assignment: Do you want to be richer than Bill Gates, then please come up with a cure for the common cold ☺☺☺. An estimated 62 million people develop colds in the United States annually, according to the U.S. Centers for Disease Control and Prevention. Adults average two to four colds a year. And women, especially those 20 to 30 years of age, have more colds than men. The Daily Bruin examined colds a few years ago (reprinted on the back) with some student suggestions, but you can come up with your own. Your own favorite remedy is perfectly acceptable and it can range from over-the-counter medicines (but not prescription drugs) to home grown remedies (tea with lemon) to Chinese herbs to spells and incantations.

Then assume you had an infinite amount of money and time to do a proper <u>experiment</u> and cure the common cold and become infinitely wealthy.

Keep in mind the following vocabulary when writing:

Confounding/Confounder/Confounding Effect
Treatment
Control
Placebo (this might not be possible)
Blind (this might not be possible either)
Double-Blind (this might not be possible either)
Bias
Randomization

You don't need any final conclusions (e.g. you cured the cold!), this isn't a real study and I don't expect you to cure the common cold by Wednesday. But you will need a way to measure how your cure works. This could be duration (how many days sick) or maybe checking for decreased symptoms (fewer coughs, fewer tissue used), or something else. It is up to you. Have fun thinking about it.

PLEASE STAPLE PARTS I and II TOGETHER. THANK YOU.