STAT 200
Assignment 3

Issued: January 9, 2002 **Due:** End of day January 16, 2002

Be sure to:
- Put your name and the Assignment # on the front
- Answer as completely as you can. All I can go on is what you give me, so show your work.
- Be as neat as possible. You can write it out, but please be neat.
- Staple or place in a folder

1. Look at the following table from the book (a description can be found on page 110). 20 points
And answer the following questions:

Source of Exposure	Fatal	Nonfatal	Total
Fire	63	53	116
Auto Exhaust	60	178	238
Furnace	18	345	363
Kerosene or spaceheater	9	18	27
Appliance	9	63	72
Other gas-powered motor	3	73	76
Fireplace	0	16	16
Other	3	19	22
Unknown	9	42	51
TOTAL	174	807	981

a. Let A be the event that the CO poisoning is caused by fire. **Find P(A)**
b. Let B be the event that CO poisoning is caused by auto exhaust. **Find P(B)**
c. Let C be the event that the CO poisoning is caused by auto exhaust and is fatal. **Find P(C)**
d. Given that the source of the poisoning is fire, what is the probability that the case is fatal?
e. Given that the case is nonfatal, what is the probability that it is caused by auto exhaust?
f. If the case is fatal, what is the probability that the source is not a furnace or a kerosene/spaceheater?

2. Answer Exercise 3.20 on page 111 in Chapter 3 (genetic makeup) 15 pts

3. Answer Exercise 3.22 on page 119 in Chapter 3 (a pair of dice) 20 pts

4. Answer Exercise 3.53 on page 136 in Chapter 3 (psychic study) **Show your work** 15 pts

5. Answer Exercise 3.56 on page 136-37 in Chapter 3 (blood infections) 20 pts

6. I want each person in the class to run an experiment on playing Solitaire on the computer. This is done by getting ony PC with Windows and using 10 pts
START PROGRAMS Accessories Games Solitaire

You need to get on any computer with solitaire and set the game up in the following way.

A. Under GAME picks OPTIONS
B. Pick draw three
C. Pick Vegas Style
D. Pick Keep Score

Vegas Style plays a game where it costs you $52 to play one hand. The draw three options turns the deck over three cards at a time and let's you go through the deck three times. You get $5 for each card you place on the top (i.e., Ace, two, three... of a suit). If you get all 52 cards on top you would get back $208 (52 x 5) - 52

It is very hard to a priori determine the odds of winning, so we will do an experiment to see. If each person plays 10 games we will have over 500 trials. I will tally the results.

I want you to play 10 games and keep track of the winnings for each game. By this I mean mark down the result after the game, **quit Solitaire**, and then start it again. This gives a fresh start each time and makes it easy to tally.

Note: your answer for each game can only be between -$52 to $208. Be sure and note a minus!

Make a table with the winnings (or losings) for each hand and summarize what happened.

Example:

Hand 1	$12
Hand 2	-$52
Hand 3	$75

You can e-mail this list to me so I can enter it into the computer for class, and also include it with your homework.