Quiz 5 - Take home - Due date: August 2   MGF-1006   Summer 2005

To receive credit you MUST SHOW ALL YOUR WORK.

1. (8 pts) A raffle offers a first prize of $500, 2 second prizes of $100 each and 4 third prizes of $50 each. If 2000 tickets are sold at $1 each, find the expected winnings for a person buying one ticket.

2. (8 pts) Suppose that the annual rainfall in Statville is known to be normally distributed with a mean of 35.5 inches and a standard deviation of 2.5 inches. In a randomly selected year, what is the probability that the rainfall exceeds 41 inches?

3. (6 pts) Dinner is to be made with 3 items (order does not matter). It will consist of at least one vegetable. If we can choose from 5 different vegetables, and 4 different meats, how many different types of dinners can be served?