Wilf Csaplar Jr. Economics 301 Homework #5 Due 10/11

Place your name on the back of this sheet of paper and nowhere else. Staple your answers on the front of this sheet of paper. Failure to follow these directions will cost you 1 point. Your assignment will be typed, except graphs can be drawn by hand and mathematical equations can be done by hand. Failure to type it will cost you 10 points. If you use double-sided printing or print on the back of scrap paper, I will give you one additional point.

1A) (20 points) Suppose that you have two possible gambles you could make. The first gamble would involve a flip of a coin. If it is heads you get $50, but if it is tails then you get $70. The second gamble would involve rolling a dice. If you get a 1 then you get $110, but if you get anything else then you get $50. What are the expected payoffs for each of the scenarios? What is the standard deviation? (The first time I did the standard deviation, I forgot to take the square root of the final answer. Don't you forget to do that.)
1B) (15 points) Draw the graph of utility versus income for the second scenario above. Draw it assuming the person is risk averse. Given your graph, what would the risk premium be? Explain your logic.

2) (10 points) How do we determine how much a risk neutral person is willing to pay to enter a gamble? Why do we do it that way?

3) (20 points) How can we tell if insurance is worth it to us to buy? Draw the diagram of utility versus income to explain your answer.

4A) (20 points) Draw the diagram for probability versus income for the following data. Your probability of earning different levels of income is given by the table to the right. Explain how you got the graph.
B) (15 points) What is the expected value of the income? Show all work.

Income	Probability
$1000	10%
$1100	15%
$1200	20%
$1300	30%
$1400	25%