2/18/2002 MA331 Applied Prob/Stats I Name:_____
Dr. Lunsford Quiz 5 (20 Points Total)

I. Males and females are observed to react differently to a given set of circumstances. It has been observed that 70% of females react positively to these circumstances, whereas 80% of males react negatively (i.e. not positively). If a group of 40 people (containing 25 males and 15 females) is subjected to the given set of circumstances, please answer the following. Clearly indicate all events you use for your computations. (14 points total)

1. If a person is chosen at random from this group what is the probability that the person had a positive reaction? (4 points)

2. If a randomly chosen person from the group reacted positively, what is the probability that the person is a male? (6 points)

3. Compare your answer in Part 2 to the probability that a randomly chosen person from the group is male. Explain the numerical differences (if any) for these two probabilities. (4 points)

II. Urn A contains 4 red chips and 7 white chips. Urn B contains 3 red chips and 6 white chips. A chip is drawn from Urn A and placed into Urn B. A chip is then drawn from Urn B. If this chip is red then what is the probability that the chip drawn from Urn A was red? Clearly indicate what events you are using to determine this probability. (6 points)