Math 30530, Probability

Name:

1. A and B are events in a sample space S, with $P(B) > 0$. Give the definition of *the conditional probability of A, given B*.

2. I toss a fair coin 3 times.

   (a) What is the probability of getting at least 2 heads?

   (b) Given the information that *at least one* of the tosses was heads, what is the conditional probability of getting at least 2 heads?

   (c) Given the information that there were at least two heads, what is the conditional probability that the first toss is tails?

   (d) Are the events {at least two heads} and {first toss heads} independent?