I. An urn contains eight red balls and nine white balls. The balls will be drawn from the urn one at a time without replacement. Please answer the following (4 each, 8 total):

(a) What is the probability that exactly two white balls will be drawn in the first five draws?

(b) What is the probability that the third white ball will be drawn on the sixth draw?

II. In a certain population of voters 40% are Republicans and 60% are Democrats. If 30% of the Republicans and 70% of the Democrats favor a certain election issue, then please answer the following. When answering the questions let R be the event a randomly chosen voter is a Republican, D be the event the voter is a Democrat, and F be the event the voter favors the issue. (6 each, 12 total)

(a) What is the probability that a randomly chosen voter from this population will favor the issue?

(b) If a voter chosen at random from this population favors the issue then what is the probability that the voter is a Democrat?