1. Suppose you are in a Family Home Evening Group with ten men and ten women. On any given Monday night, the probability of a boy showing up is 8/10 and the probability of a girl showing up is 9/10, independently of any one else.

a) (2 pts) What is the probability that all twenty show up on a Monday night?

b) (2 pts) What is the probability that at least eight girls show up?

c) (2 pts) What is the probability that five boys and five girls show up?

d) (2 pts) What is the probability that less than two people show up?

e) (2 pts) How many different groups can you form of the twenty people if two groups must have seven people, and one group must have six people?