Math 387/Quiz 3

Show all work!! No credit otherwise! Look for more problems on the back.

1. (10 pts) A valid phone number consists of seven digits where neither of the first two digits is 0 or a 1. How many valid phone numbers are there?

2. A sequence of 5 cards is drawn from the standard deck.
   a) (5pts) How many sequences will have exactly one Ace?

   b) (5pts) How many sequences will have at most one Ace?
3. A bag holds 24 different objects, of which 6 are orange, 6 are white, 6 yellow and 6 are red. If a juggler selects three objects to juggle, what is the probability that

a) (5pts) All three objects are the same color?

b) (5pts) All three objects have different color?