MA 2621 - A 17

HW #3 (Problems 1-8) **Due T 9/12**

#1 **Six** performers are to present their comedy acts on a weekend evening at a comedy club. One of the performers insists on being the last stand-up comic of the evening. If this performer's request is granted, how many different ways are there to schedule the appearances?

#2 Using the letters in the word "**SQUARE**", How many 6- letter arrangements, with no repetitions, are possible if,

a) there is no any restriction,

b) the first letter is a vowel,

c) vowels and consonants are alternate, beginning with a consonant.

#3 We draw the top 8 cards from a well-shuffled standard 52-card deck.

Find the probability that:

(a) The 8 cards include exactly 3 aces.

(b) The 8 cards include exactly 2 kings.

(c) The probability that the 8 cards include exactly 3 aces, or exactly 2 kings, or both.

#4. How many different words (letter sequences) can be obtained by rearranging the letters in the word MASSACHUSETTS?

#5 A well-shuffled 52-card deck is distributed to 4 players such that each player gets same number of cards. Find the probability that each of the players gets an ace.

#6 You go to a party which has 1000 guests (including you).

a) What is the probability that exactly one **other guest** has the same birthday as you?

b) What is the probability that at least two guest have the same birthday as you?

#7 20% of all students are left handed. A class of size 20 meets in a room with 5 left handed and 18 right handed chairs. Find the probability that each student will have a chair to their needs?

#8 Suppose that two chess players had played numerous games and it was determined that the probability that Player A would win is 0.40, the probability that Player B would win is 0.35, and the probability that the game would end in a draw is 0.25. If these two chess players played 12 games, what is the probability that Player A would win 7 games, Player B would win 2 games, and the remaining 3 games would be drawn?

==========

Suggested Problems

P71-74: 2, 4, 6, 8, 10, 14, 16, 22, 24, 30, 36.