(1) If you have 10 people to choose from:

(a) How many ways can you create a committee with 4 members?

(b) Ho many ways can you elect a Chairman and Co-Chairman of the committee?

(2) Four cards were drawn at random (one at a time) without replacement. What is the probability that the cards are all face cards?

(3) How many numbers between 2000 and 5000 can be made from the digits 1, 2, 4, 5, 7, and 8 if each digit is used only once?

(4) Two number cubes are rolled – one is black and the other is yellow. What is the probability that the black cube shows an even number and the sum is 8?

(5) If there are 5 pop CDs, 4 rap CDs, and 4 jazz CDs:

(a) How many ways can you arrange the CDs on a shelf if they are ordered according to type?

(b) Suppose you grab 5 CDs at random. What is the probability of selecting 2 rap CDs and 3 pop CDs?

(6) A number cube is tossed 50 times and 2 appeared 12 times. Find the experimental probability of not rolling a 2.

(7) Find the 5th term of (2*a* – 3*b*)10.

(8) Find the probability that a card drawn from a deck of 52 cards is a 9 or a heart.

(9) Find the probability that a point chosen at random will lie in the shaded area.

(10) There are 3 apples and 5 oranges in a bag. Determine each probability.

(a) Selecting 2 apples when they are chosen at random without replacement.

(b) Selecting an orange, then an apple when they are chosen at random without replacement.

(11) Of the 400 doctors who attended a conference, 240 practiced family medicine and 130 were from countries outside the United States. One-third of the family medicine practitioners were not from the

United States.

(a) What is the probability that a doctor practices family medicine or is from the United States?

(b) What is the probability that a doctor practices family medicine or is not from the United States?