Review for Quiz 5

1. Three cards are dealt from a well-shuffled deck.

      a) Find the chance that all of the cards are hearts.

      b) Find the chance that none of the cards are hearts.

      c) Find the chance that the cards are not all hearts.

2. A standard deck of cards is shuffled. You are dealt one card at a time, until an ace turns up. What is the chance of getting your first ace on the third card?

3. Two draws are made (with replacement) from the following box containing blue and white tickets.

     [B , B , B , W , W]

  a) Find the probability that both of the tickets drawn are blue.

  b) Find the probability that at least one blue ticket is drawn.

4. One ticket will be drawn at random from each of the two boxes shown below:

     A: [3 , 4 , 5]   B: [3 , 4 , 5 , 6]

  Find the chance that

      a) The number drawn from A is smaller than the one from B.

      b) The number drawn from A equals the one from B.

5. The probability that a person is infected by a certain cold virus is .2. If a random sample of 10 people is taken, what is the probability that at least one person will be infected by the cold virus?

6. A pair of dice is thrown. Find the probability of getting a "five" or a "seven".

7. Consider the three boxes containing red tickets and white tickets indicated below. One ball is drawn at random from each box.

[R , W]   [R , R , W]   [R , R , R , W]

a) What is the probability that all three tickets are white?

b) What is the probability that at least one of the tickets is white?

8. An astronaut's oxygen supply comes from two independent sources. Source A has probability .95 of working, and source B has probability .90 of working. What is the probability that at least one of the sources is working?

9. A standard deck of cards is shuffled. You are dealt one card.

   a) Find the probability that you get a *queen* or a *king*.

   b) Find the probability that you get a *queen* or a *diamond.*