Assignment 1

1. Find the number of ways to line up 4 apples, one orange, and one pear.
2. There are 20 cards numbered form 1 to 20. Two different cards are chosen at random. What is the probability that one number is twice the other number.
3. A coin is flipped 10 times. How many sequences of heads and tails are possible?
4. A dice is rolled 5 times. How many sequences of numbers are possible.
5. You pick an integer at random between 1 and 200 inclusive. What is the probability that you have picked a multiple of 2 or 5?
6. How many ways are there to pick a president and a vice president in a club of 100 members.
7. Hom many ways are to pick 2 consuls (with equal rights) from a senate of 100 members?
8. How many ways are there to pick a president and a secretary from a club of 100 members, if you allow the president and the secretary to be the same person?
9. How many ways are to select a committee of 7 women and 3 men out of a set of 9 women and 4 men?
10. You have an unlimited supply if nickels, quarters and dimes. How many ways are there to grab 10 coins out of them? (Order does not matter).