1. A bookstore has 12 *Calculus* textbook and 8 *Psychology* textbook left on the shelf. If two customers purchased a textbook, find the probability that one of each textbook was purchased.
2. There are 10 married couples in a gulf club. If 2 men and 2 women are selected at random to plan the fall tournament, find the probability that they are married to each other.
3. Find the probability of getting 3 face cards when two cards are drawn from a deck of cards without replacement.
4. A junior-senior committee consisting of 4 people is to be formed from 18 juniors and 17 seniors. Find the probability that the committee will consists of these people. (Assume that the selection will be random).
   1. All seniors.
   2. 2 juniors and 2 seniors.
   3. All juniors.
   4. 1 junior and 3 seniors.
5. In a certain math class there are 24 students: 13 boys and 11 girls. Four are selected to attend a symposium. Find these probabilities.
   1. All 4 selected will be girls.
   2. All 4 selected will be boys.
   3. 2 boys and 2 girls will be selected.
   4. 3 girls and 1 boy will be selected.
6. An insurance sales representative selects three policies to review. The group of policies she can select from contains 8 life policies, 5 automobile policies, and 7 homeowner’s policies. Find the probability of selecting:
   1. All life policies.
   2. All homeowner’s policies.
   3. All automobile policies.
   4. 1 of each policy
   5. 2 life policies and 1 automobile policy.
7. A fish bowl contains 12 red balls, 6 blue balls, and 8 black balls. Suppose that you pick 3 balls without looking.
8. What is the probability that you picked all red balls?
9. What is the probability that you picked all black?
10. What is the probability that you picked a ball of each color?
11. What is the probability that you picked 2 red balls and 1 blue ball?
12. What is the probability that you picked 2 black balls and 1 red ball?
13. When 3 dice are rolled, what is the probability of getting
    1. A sum of 6
    2. A sum of 12
    3. A sum of 15