

- 1. Nine Poker chips (4 red chips, 3 blue chips and 2 green chips) are placed in a hat and are then randomly selected from the hat. Find the following Probabilities:**

- a) If a single chip is drawn from the hat, what is the probability the chip is red?**

- b) If a single chip is drawn from the hat, what is the probability the chip is not red?**

- c) If two chips are drawn from the hat, what is the probability that both chips are red?**

- d) If two chips are drawn from the hat, what is the probability the second chip is red?**

- 2. In one region, 30% of all residential telephone numbers are unlisted. If four residential housing units are randomly selected, find the probability that all of them have unlisted numbers.**

3. A legislative advisory committee consists of 20 Democrats (8 of whom are women) and 10 Republicans (3 of whom are women).

(a) Two of the committee members are randomly selected for a special research project. What is the probability that they are both Democrats?

(b) If the chairperson is randomly selected, find the probability of getting a Democrat or a man.

(c) At each meeting of this committee, one person is randomly chosen from the 30 members and that person must act as a secretary for the meeting. Find the probability that the first two meetings have male secretaries.

(d) If one of the committee members is randomly selected as treasurer, find the probability that a women is chosen, given they are Republican.

(e) Are gender and political affiliation mutually exclusive?

(f) Are gender and political affiliation independent?

4. A three-person committee is to be selected at random from a group of five women and four men. Find the probability of selecting an all-woman committee.

5. An unprepared student makes random guesses for the ten true-false questions on a quiz.

(a) Find the probability that there is at least one correct answer. a. _____

(b) Find the probability that the answers are all correct? b. _____

(f) Find the probability that the answers are either all correct or all wrong. c. _____

6. A Poker hand consists of 5 cards from a standard deck of 52 cards.

(a) How many different Poker hands are possible? a. _____

(b) Find the probability of being dealt a Flush
(Note: a Flush consists of five cards all in the same suit). b. _____

7. Complete the following:

<u>P[A]</u>	<u>P[A']</u>	<u>Odds In Favor</u>	<u>Odds Against</u>
_____	_____	<u>3:1</u>	_____
_____	_____	_____	<u>3:2</u>
_____	<u>1/3</u>	_____	_____
<u>0.6</u>	_____	_____	_____