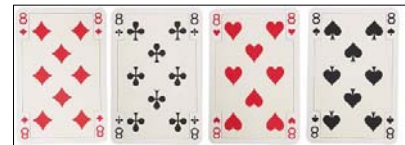# Probability & Playing Cards

Name_____

Directions: Answer the following questions pertaining to the card playing antics of Brett Maverick (played by Mel Gibson) in the movie *Maverick*. All questions pertain to a standard deck of 52 cards.

1. In the movie *Maverick*, Brett continually tries to predict which card he will draw from a standard deck of 52 cards. He wants to believe that he has the magical ability to predict which card will appear.

    a) He thinks of the 8 of clubs and draws a card from the deck. What is the probability that he will draw the 8 of clubs?

    b) If he thinks simply of a card with the number 8, what will be the probability of drawing such a card?

    c) What is the probability of Brett drawing a card with the number 8 **and** a club card?

    d) What is the probability of Brett drawing a card with the number 8 **or** a club card?

2. In preparation for an upcoming poker game, Brett attempts to draw two aces in a row.

    a) What is the probability of drawing two aces in a row? (*without replacement*)

    b) Brett draws an ace on his first draw. Now, what is the probability that he will draw another ace? (*without replacement*)

3. During the final game in the Poker Tournament, Brett's fellow players are holding some impressive hands. Remember that the winning hands are hands with a low probability of occurrence.

a) The Commodore is holding four 8's. What is the probability of being dealt four of a kind?

Commodore's hand

b) The outlaw Angel is holding a straight flush (five cards in a row, all the same suit, not a Royal Flush) What is the probability of being dealt a straight flush?

Angel's hand

c) Brett won the Tournament with a Royal Flush (consisting of 10, J, Q, K, A, all of the same suit). What is the probability of being dealt a Royal Flush?

Brett Maverick's hand