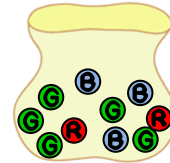


CONDITIONAL PROBABILITY

1. Determine the following **conditional** probabilities.

Consider a bag with marbles, 3 blue marbles, 2 red marbles, and 5 green marbles.
Three marbles are drawn in sequence and are taken without replacement.



i. $P(\text{2nd draw: blue} \mid \text{1st draw: red}) =$ Reduced Fraction:

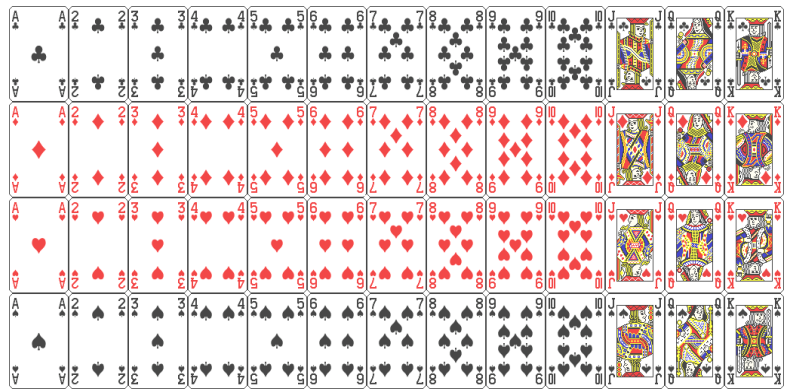
ii. $P(\text{2nd draw: blue} \mid \text{1st draw: blue}) =$ Reduced Fraction:

iii. $P(\text{3rd draw: blue} \mid \text{1st draw: red, 2nd draw: blue}) =$ Reduced Fraction:

ii. $P(\text{1st draw: blue} \mid \text{1st draw: red}) =$ Reduced Fraction:

2. Determine the following **conditional** probabilities.

Consider drawing 1 card from a standard deck of shuffled cards:



i. $P(\text{Queen} \mid \text{Face Card}) =$ Reduced Fraction:

ii. $P(\text{Heart with a Number} \mid \text{Red Card}) =$ Reduced Fraction:

iv. $P(\text{number less than 6} \mid \text{Face Card}) =$ Reduced Fraction:

iii. $P(\text{Card with a Letter} \mid \text{King}) =$ Reduced Fraction:

v. $P(\text{Black Jack} \mid \text{Face Card}) =$ Reduced Fraction:

3. Consider the following table with information about all of the students taking Statistics at Phoenix High School.

A. $P(\text{Full-time} \mid \text{Male}) =$ Reduced Fraction:

C. $P(\text{Female} \mid \text{Part-time}) =$ Reduced Fraction:

	Full-time	Part-Time	Total
Female	28	15	43
Male	12	16	28
Total	40	31	71

B. $P(\text{Male} \mid \text{Full-time}) =$ Reduced Fraction:

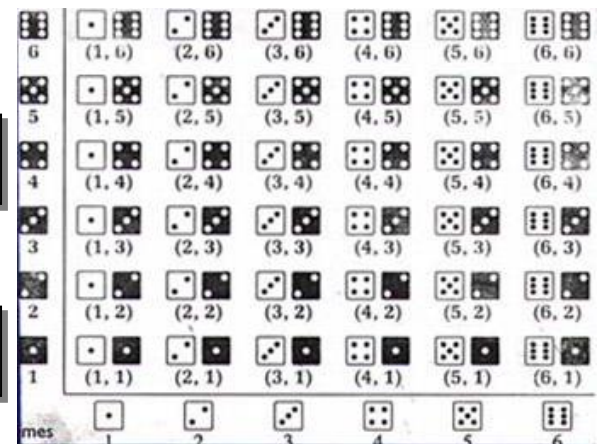
D. $P(\text{Full-time} \mid \text{Part-time}) =$ Reduced Fraction:

Determine whether each of the following are **Mutually Exclusive** or **Inclusive** and then determine the probability.

4. What is the probability of rolling a standard number cube to a number that is even or greater than 4?

Circle one of the following:
 Mutually Exclusive Inclusive

Reduced Fraction:

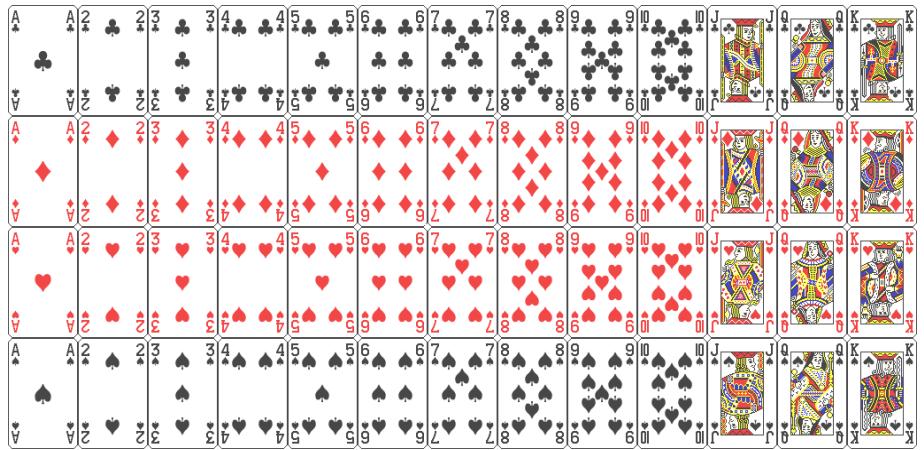


5. What is the probability of rolling two dice and having getting a sum of 4 OR getting a sum greater than 10?

Circle one of the following:
 Mutually Exclusive Inclusive

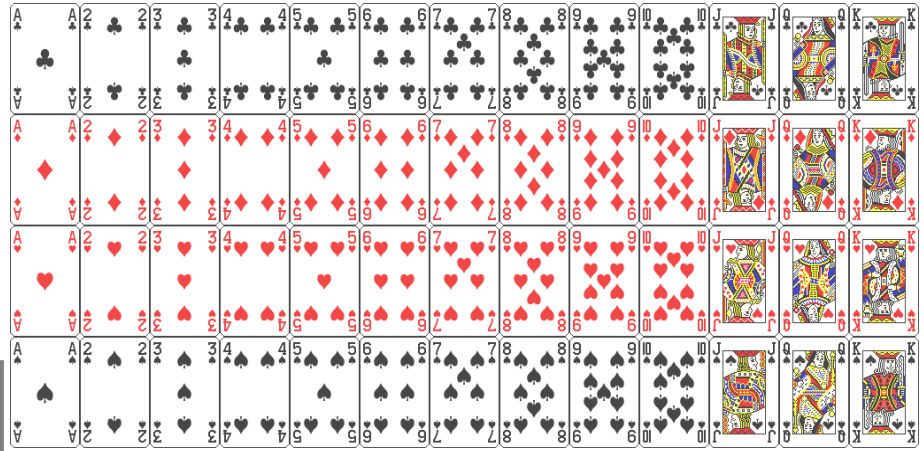
Reduced Fraction:

7. What is the probability of randomly selecting a card from a standard 52 card deck and having the card be a red card or a face card?



Circle one of the following:	Reduced Fraction:
Mutually Exclusive Inclusive	

8. What is the probability of randomly selecting a card from a standard 52 card deck and having the card be a face card or an odd numbered card?

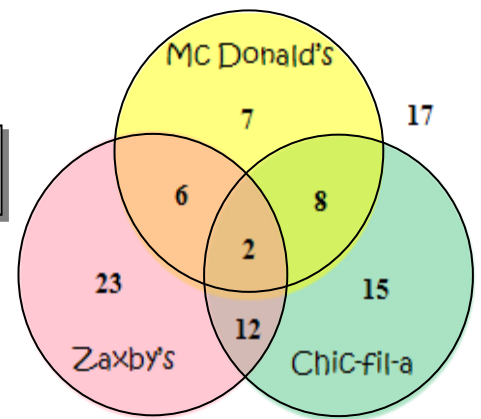


Circle one of the following:	Reduced Fraction:
Mutually Exclusive Inclusive	

9. The following shows a VENN diagram with the results of a survey a teacher gave to all of her students. It represents where all of the students have gone to eat over the last month. What is the probability of the following?
- i. What is the probability of randomly selecting a person from this group and picking a student that has NOT eaten at any of the restaurants OR they ate at McDonald's?

Circle one of the following:
Mutually Exclusive Inclusive

Reduced Fraction:



- ii. What is the probability of randomly selecting a person from this group and picking a student that has eaten at Mc Donald's OR Chick-fil-a?

Circle one of the following:
Mutually Exclusive Inclusive

Reduced Fraction:

