Probability – Simple Events

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is the chance that some event will occur. A \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ is one outcome or a collection of outcomes. An \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a possible results in a probability experiment.

Probability can be written as a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ,or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. It is simply a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ that compares the number of favorable outcomes to the number of possible outcomes.

Class Examples:

1. A cube with sides labeled 1 to 6 is rolled. Find P(6) (read the probability of rolling a 6). Express your answer as a fraction, decimal, and percent.

2. A penny is tossed. Find P(heads). Write your answer as a fraction, decimal, and percent.

3. Find the probability of rolling a 2, 3, or 4 on the number cube mentioned in number 1.

4. Find the probability of NOT rolling a 6 in number 1.

5. A bag contains 5 blue, 8 red, and 7 green marbles. A marble is selected at random. Find…

 A. P(not red)

 B. P(green)

 C. P(yellow)

 D. P(blue)

Compound Events

The set of all possible outcomes in a probability experiment is called the \_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, and \_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ can be used to represent the sample space, making it easier to identify the number of possible outcomes.

Don't Forget...

 Probability = $\frac{favorable outcomes}{total outcomes}$

Class Examples:

1. The three students chosen to represent Mr. Baldric’s class in a school assembly are Adrienne, Greg, and Carlos. All three of them need to sit in a row on the stage. Find the sample space for the different ways they can sit in a row.

What is the probability that Adrienne will NOT have to sit by Greg?

2. A caterer made sandwiches for a company picnic. Each sandwich was made with rye, sourdough, or white bread, and contains either ham or turkey. Show the sample space of all of the possible sandwich combinations.

If there is an equal number of each of the sandwiches, what is the probability of choosing a Turkey Sandwich on Sourdough bread?

3. Suppose you toss a quarter, a dime and a nickel. Find the sample space for all the possible ways the three coins can land (heads, tails).

What is the probability of getting three tails?

What is the probability of getting two heads and one tails?

4. The animal shelter has both male and female Labrador Retrievers in yellow, black, or brown. There is an equal number of each kind. Show the sample space below of all the possible types of Retrievers available.

What is the probability of choosing a yellow female?