**Determining the Likelihood of an Event Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Probability is the measure of how likely an event is to happen. It is possible to have a 100% probability of the event which makes it “certain” to happen. It is also possible to have a zero percent chance which would make the event “impossible”. You are going to look at some situations and determine how likely it is that they would happen.

For the following number line, **fill in each blank**.

\_\_\_\_\_% \_\_\_\_\_% \_\_\_\_\_% \_\_\_\_\_% \_\_\_\_\_%

0 \_\_\_\_\_ ½ \_\_\_\_\_ 1

We can describe these probabilities using the categories shown below depending on where they would fall on a number line. NOTE: *EVERYTHING between equally likely and certain is determined “likely” and EVERYTHING between equally likely and impossible is determined “unlikely”. Sometimes “likely” is called “as likely as not” and “unlikely” is called “as unlikely as not”.*



If possible, **write a ratio** to represent each probability below. Next, determine if each event is impossible, unlikely, equally likely, likely, or certain. You may not be able to have a ratio to represent each scenario but you CAN determine the likelihood of the event using the categories shown on the number line.

|  |  |
| --- | --- |
| **A.** If you roll a die you will get a number less than 7. | **B.** If you roll a die you will get an odd number. |
| **C.** Jodi has dance rehearsals on Tuesday afternoons. How likely is it that Jodi is at the mall on a Tuesday afternoon? | **D.** A bag contains 12 pennies and 12 dimes. How likely is it that you will draw a dime from the bag? |
| **E.** You must be 15 years old to obtain a learner’s permit to drive. Emily is 13 years old. How likely is it that Emily has her learner’s permit? | **F.** The club volleyball team is made up of 7 boys and 4 girls. How likely is it that the first player chosen at random will be a girl? |
| **G.** Card numbered 1-8 are in a box. How likely is it that you will pull out a number greater than 2? | **H.** How likely is it that the card you will pull out in problem G will be a number less than 4? |