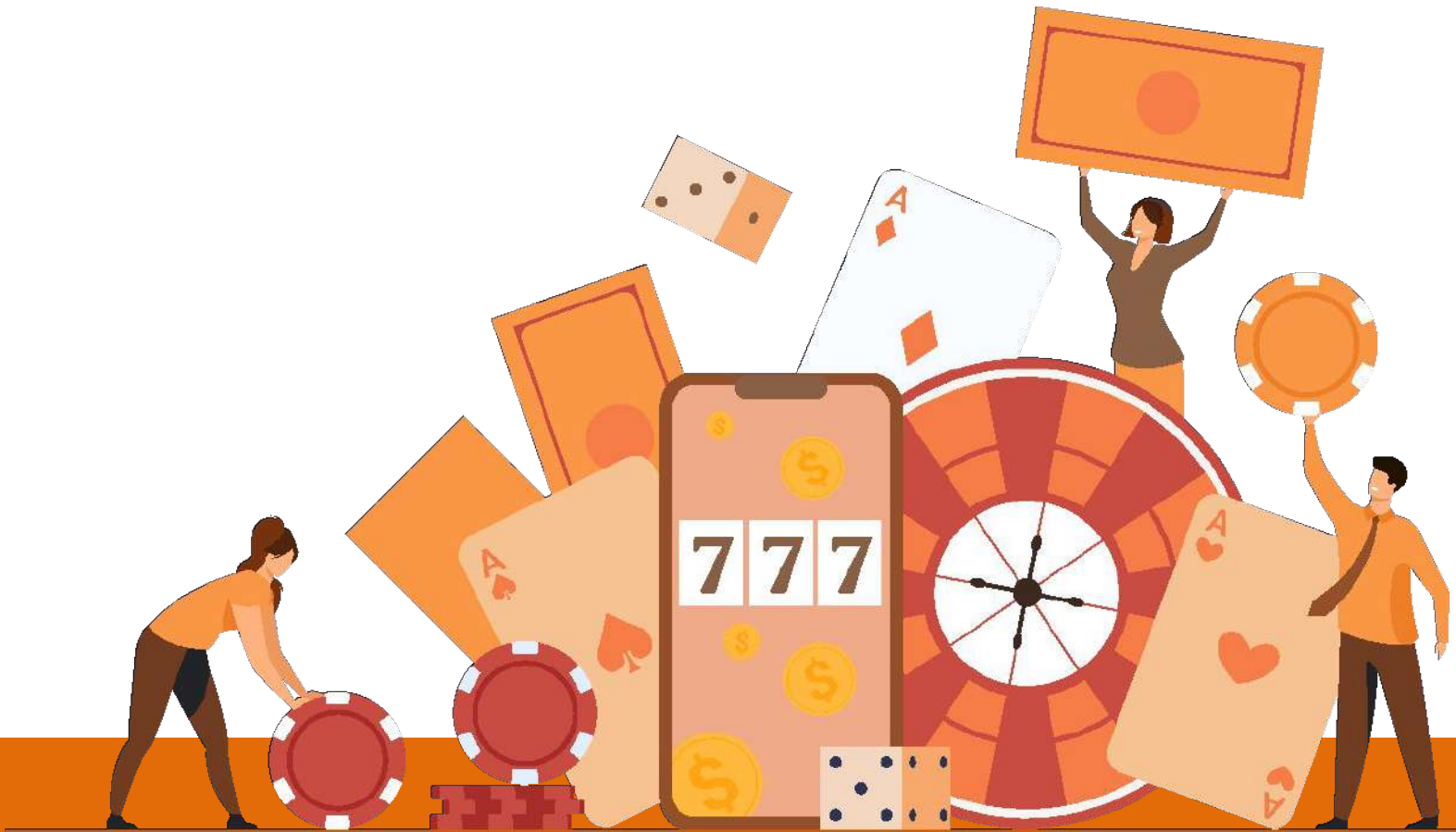


# PROBABILITY FOR MAKING LUDO GAME





**WHAT IS PROBABILITY?**

**LET'S SAY THAT YOU ARE PLAYING LUDO  
AND IT'S YOUR TURN TO ROLL THE DICE.**

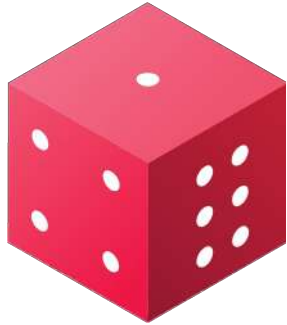




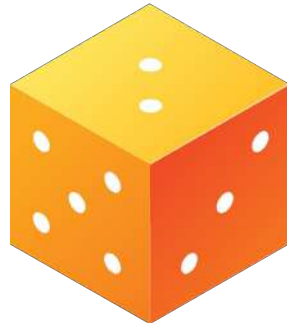
**WHAT WILL BE THE POSSIBLE  
OUTCOMES OR THE NUMBERS  
YOU CAN GET ????**

# THE POSSIBLE NUMBERS THAT YOU CAN GET ARE:-

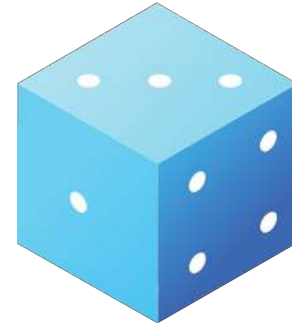
1



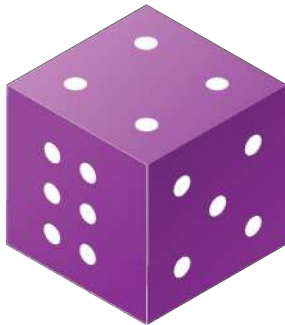
2



3



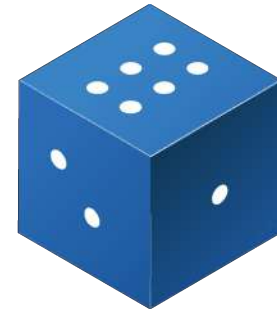
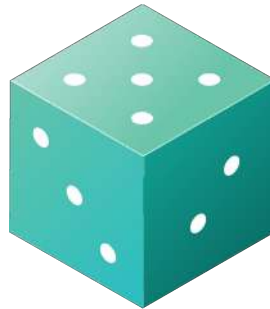
4



5

OR

6



(I.E. ANY 1 NUMBER OUT OF THESE SIX NUMBER)

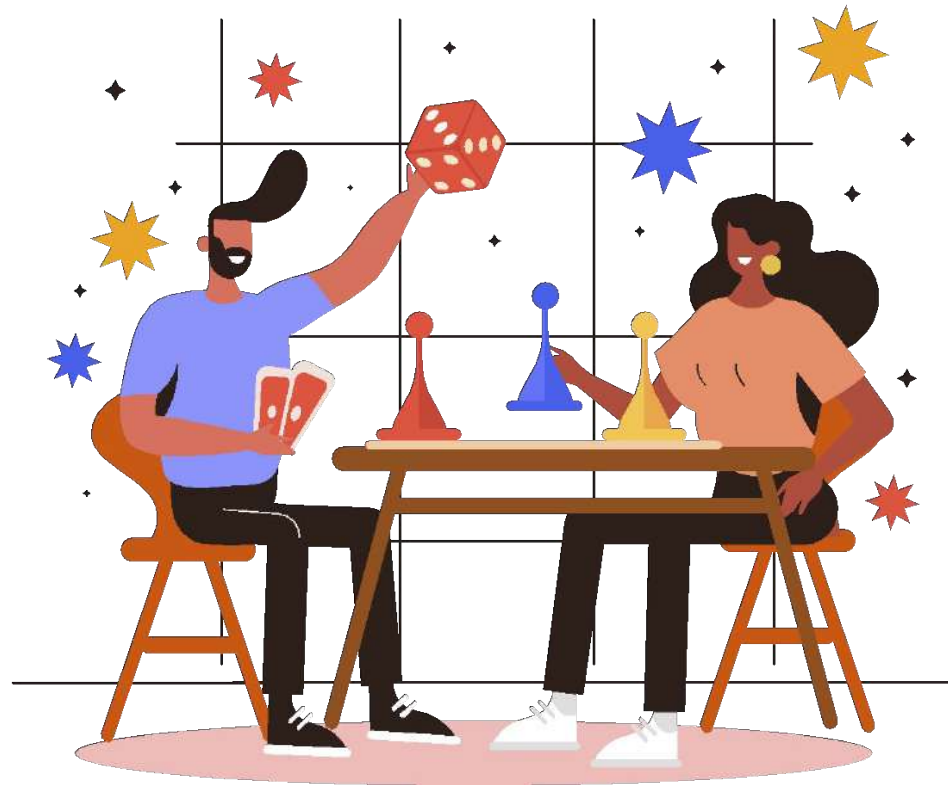
NOW IF YOU ROLL THE DICE  
ONCE, ONLY ONE TIME,  
WHAT WILL BE THE CHANCES  
THAT YOU WILL GET 6???



**THE DICE CAN GIVE YOU ANY NUMBER OUT OF**

**1 2 3 4 5 6**

**WHEN YOU ROLL IT ONCE.**



**THEREFORE**  
**THE CHANCES OF YOU GETTING A '6' IS ONCE OUT OF THESE SIX NUMBERS**  
**I.E. 1/6**

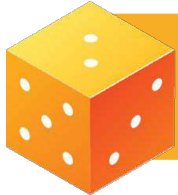




## SIMILARLY, THE CHANCES OR PROBABILITY OF YOU GETTING A



'1' IS ONCE OUT OF THESE SIX NUMBERS I.E.  $1/6$



'2' IS ONCE OUT OF THESE SIX NUMBERS I.E.  $1/6$



'3' IS ONCE OUT OF THESE SIX NUMBERS I.E.  $1/6$



'4' IS ONCE OUT OF THESE SIX NUMBERS I.E.  $1/6$



'5' IS ONCE OUT OF THESE SIX NUMBERS I.E.  $1/6$

**LET'S TAKE ANOTHER  
EXAMPLE**



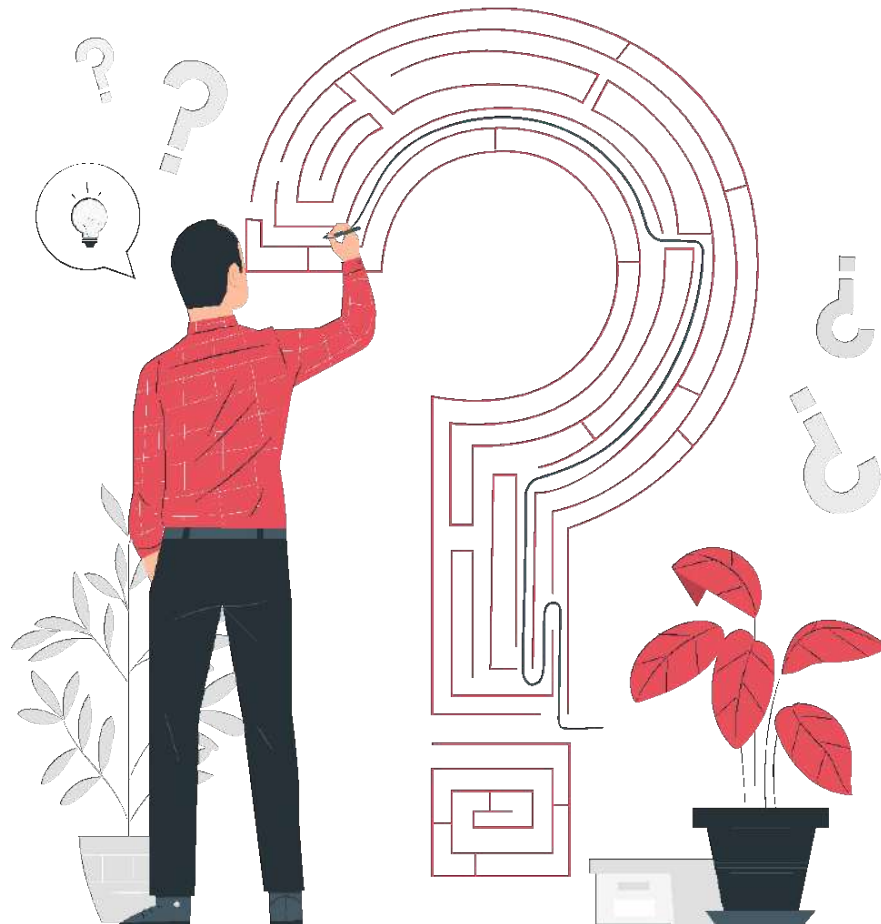
**LETS TOSS A COIN ONLY ONCE.**

**WHAT WILL BE THE POSSIBLE OUTCOMES?  
A HEAD (OR) A TAIL**

**I.E. TWO POSSIBLE OUTCOME.**



# THINK WHAT WILL BE THE CHANCES OF YOU GETTING A HEAD (AND) A TAIL



# WHAT WOULD I GET IF I TOSS THE COIN?



**WHAT WILL BE THE POSSIBLE  
OUTCOMES?**

**A HEAD**

**A TAIL**

**I.E. TWO POSSIBLE OUTCOME.**



THE CHANCES OR PROBABILITY OF  
YOU GETTING A HEAD IS ONCE OUT  
OF THE TWO POSSIBLE OUTCOMES,  
I.E.  $\frac{1}{2}$

# SO WHAT IS PROBABILITY??

**PROBABILITY IS THE CHANCES  
OF SOME OCCURRENCE OR  
SOME EVENTS.**

**PROBABILITY MEANS  
POSSIBILITY.**

**BY DEFINITION**

**PROBABILITY IS A BRANCH OF  
MATHEMATICS THAT DEALS  
WITH THE OCCURRENCE OF A  
RANDOM EVENT.**





# EVENT

IT IS A SINGLE OUTCOME OF AN EXPERIMENT.

## EXAMPLE

GETTING A HEADS WHILE TOSSING A  
COIN IS AN EVENT.



OR

GETTING A '2' WHILE ROLLING A DICE IS  
AN EVENT.



# **WHAT IS AN EXPERIMENT OR TRIAL??**

**A SERIES OF ACTIONS WHERE THE OUTCOMES ARE ALWAYS UNCERTAIN**

## **EXAMPLE**

**TOSSING OF A COIN.**

**ROLLING OF A DICE.**

**SELECTING A CARD FROM THE  
DECK OF A CARDS.**

# WHY ARE WE STUDYING PROBABILITY?

BECAUSE IT HELPS US TO STUDY THE  
UNPREDICTABLE SEQUENCE OF EVENTS.  
TO UNDERSTAND THE POSSIBILITIES OF  
FUTURE EVENTS.

BECAUSE PROBABILITY IS THE LOGIC OF  
UNCERTAINTY AND RANDOMNESS.  
UNCERTAINTY AND RANDOMNESS OCCUR IN  
JUST ABOUT EVERY FIELD OF APPLICATION  
AND IN DAILY LIFE  
IT HELPS US TO MAKE THE DECISIONS.

SO NOW WITH THE HELP OF PROBABILITY YOU CAN WIN

# TYPES OF PROBABILITY

```
graph LR; A[TYPES OF PROBABILITY] --- B[ ]; B --- C[THEORETICAL]; B --- D[EXPERIMENTAL]; B --- E[AXIOMATIC];
```

**THEORETICAL**

**EXPERIMENTAL**

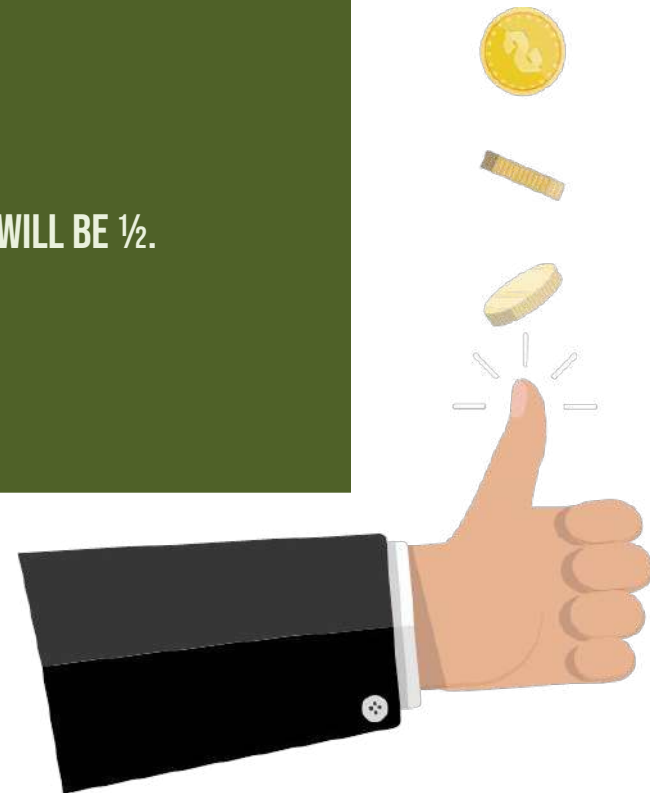
**AXIOMATIC**

**AND WE WILL STUDY ABOUT THE THEORETICAL PROBABILITY AND EXPERIMENTAL  
PROBABILITY**

# THEORETICAL PROBABILITY

THE THEORETICAL PROBABILITY IS MAINLY BASED ON THE REASONING BEHIND PROBABILITY. THEORETICAL PROBABILITY IS ALSO CALLED AS CLASSICAL PROBABILITY.

FOR EXAMPLE,  
IF A COIN IS TOSSED, THE THEORETICAL PROBABILITY OF GETTING A HEAD WILL BE  $\frac{1}{2}$ .



# EXPERIMENTAL PROBABILITY



IT IS BASED ON THE BASIS OF THE OBSERVATIONS OF AN EXPERIMENT. THE EXPERIMENTAL PROPERTY, CAN BE CALCULATED BASED ON THE NUMBER OF POSSIBLE OUTCOMES BY THE TOTAL NUMBER OF TRIALS.

**FOR EXAMPLE  
IF A COIN IS TOSSED 10 TIMES AND  
HEADS IS RECORDED 6 TIMES THEN, THE  
EXPERIMENTAL PROBABILITY FOR  
HEADS IS  $6/10$  OR,  $3/5$ .**



# NOTE

THE PROBABILITY OF ALL THE EVENTS OF AN EXPERIMENT ADDS UP TO  
1.





# EXAMPLE

WHEN TOSSING A COIN. THERE ARE ONLY TWO POSSIBLE  
OUTCOME WHICH ARE A HEAD AND A TAIL.

THE PROBABILITY OF GETTING A HEAD

$$\text{I.E. } P(H) = \frac{1}{2}$$

THE PROBABILITY OF GETTING A TAIL

$$\text{I.E. } P(T) = \frac{1}{2}$$

THE SUM OF ALL THE POSSIBLE OUTCOME P(E)

$$= P(H)+P(T)$$

$$= \frac{1}{2} + \frac{1}{2}$$

$$= 1$$

