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### WORKSHEET 24

SCHOOL: BA SANGAM COLLEGE  
SUBJECT: MATHEMATICS

YEAR: 10  
NAME OF STUDENT: \_\_\_\_\_

<b>STRAND</b>	<b>6- PROBABILITY</b>
<b>SUB-STRAND</b>	<b>6.4 Probability Experiment</b>
<b>LEARNING OUTCOME</b>	To learn and calculate probability of any event using real life examples

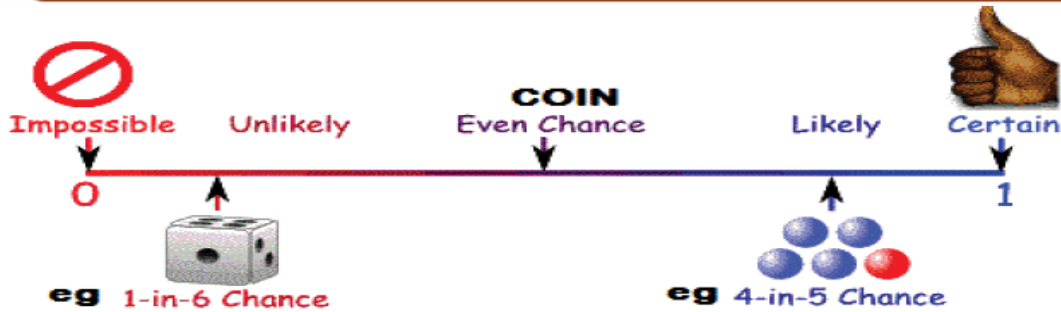
### DEFINITIONS

- i. **Probability** – is the chance or likely hood of an event will occur. It can be written as a ratio, fraction, decimal or as a percentage.
- ii. **Event** – An event in probability is the set of a group of different outcomes of an experiment. Suppose you flip a coin multiple times, an example of an event would be getting a certain number of heads
- iii. **Experiment** – is a trial or a test to see what happens eg, to flip a coin to see whether you get head or a tail.
- iv. **Outcomes** – all the possible results of an experiment.
- v. **Sample Space (S)** – a list of all possible outcomes in an experiment. example If you flipped a coin once, the sample space S would be given by:  $S = (H, T)$
- vi. **Random Event** – something that will happen.
- vii. **Randomly Selected** – picking/selecting without planning or seeing.
- viii. **Certain** – an event that had more than 50% chance of occurring.
- ix. **Likely** – an event that has more chances of happening.

### FINDING PROBABILITY

The highest probability an event can have is 1 or 100% and it means that the event will certainly happen. The lowest probability is 0% meaning that the event is certainly not going to happen.

$$\text{Probability of an event happening} = \frac{\text{Number of ways it can happen}}{\text{Total number of outcomes}}$$



Probability is always between 0 and 1

From above it can be seen that:

1. the probability of rolling a zero in a die is **impossible**- so the probability is 0
2. the chance of getting a head or a tail is **equal or even**. So, the probability is 50% or 0.5 to get either head or tail
3. The chance of picking a blue ball from the pile is **likely**. So, the probability is 4/5

### EXERCISE

1. Which of these can you be certain of? Why?

- i. Your height
- ii. Cost of your fare to school
- iii. Exact time of arrival of your school bus

(1mark)

2. Write the following probabilities as percentages:

i. 0.35

ii.  $\frac{2}{3}$

iii. 1 out of 5

(3marks)

3. List the sample space for:

- i. Throwing a single die

(2marks)

ii. Throwing two dice

(2marks)

iii Tossing a coin.

(2marks)

iv) tossing two coins at a time.

(2marks)