

Probability

S.no	Term	Description
1	Empirical probability	It is a probability of event which is calculated based on experiments $\text{Emperical Probability} = \frac{\text{No.of trails which expected outcome}}{\text{Total number of trails}}$ Example: A coin is tossed 1000 times; we get 499 times head and 501 times tail, So empirical or experimental probability of getting head is calculated as $p = \frac{499}{1000} = 0.499$ Empirical probability depends on experiment and different will get different values based on the experiment
2	Important point about events	If the event A, B, C covers the entire possible outcome in the experiment. Then, $\mathbf{P(A) + P(B) + P(C) = 1}$
3	impossible event	The probability of an event (U) which is impossible to occur is 0. Such an event is called an impossible event $\mathbf{P(U)=0}$
4	Sure or certain event	The probability of an event (X) which is sure (or certain) to occur is 1. Such an event is called a sure event or a certain event $\mathbf{P(X) = 1}$
5	Probability of any event	Probability of any event can be as $0 \leq P(E) \leq 1$