

# Probability

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