Definitions for Probability

Probability

Probability is the likelihood of the occurance of an event. The probability of event A is written P(A). Probabilities are always numbers between 0 and 1, inclusive.

The four basic rules of probability:

1) For any event A, $0 \leq P(A) \leq 1$.
2) P(impossible event) = 0.
    Also written P(empty set) = 0 or $P(\emptyset) = 0$.
3) P(sure event) = 1.
    Also written P(S) = 1, where S is the sample set.
4) P(not A) = 1 - P(A).
    Also written P(complement of A) = 1 - P(A) or
    $P(A^C) = 1 - P(A)$ or $P(\bar{A}) = 1 - P(A)$.

Experiment

In the study of probability, the name given to any controlled and repeatable process.

Event

A set of possible outcomes resulting from a particular experiment.

Outcome

A single specific possible result of an experiment.

Experiment	Outcomes
Tossing a coin	Heads, Tails
Rolling a six sided die	1,2,3,4,5,6