Probability

If there are n possible outcomes to an experiment, and m ways in which event A can happen, then the probability of event A (which we write as P(A)) is

$$P(A) = \frac{m}{n}$$

Probability

The probability of the event A may be interpreted as the proportion of times that event A will occur if we repeat the random experiment an infinite number of times.

Rules:

1. $0 \leq P(A) \leq 1$: the probability of any event lies between 0 and 1 inclusive.
2. $P(S) = 1$: the probability of the sample space is always equal to 1.
3. $P(A^c) = 1 - P(A)$: how to compute the probability of the complement.