The Binomial Distribution

Binomial[6, 0.5]

Type: Discrete

Abbreviation: Binomial[n,p]

Interpretation: $X$ is the number of successes in $n$ independent trials, where the probability of success on an individual trial is $p$

Mass Function: $p_X(x) = \binom{n}{x} p^x (1 - p)^{n-x}$ $x = 0, 1, \ldots, n$

Parameters: $n, p$

Conditions: $n$ is a positive integer;
$p$ is a real number in the interval $[0,1]$. 