#### BINOMDIST

[Syntax](Syntax.docx):

BINOMDIST ( number-successes , number-trials , success-probability , cumulative-flag )

Description: Computes the individual term binomial distribution probability.

Mathematical Formula:

The binomial probability mass function is:



where:



[is](is.docx) COMBIN(n,x).

The cumulative binomial distribution is:



Arguments:

|  |  |  |
| --- | --- | --- |
| Name | Type | Description |
| number-successes | number | The number of successes in number-trials, truncated to an integer. |
| number-trials | number | The number of independent trials, truncated to an integer. |
| success-probability  | number | The probability of success on each trial. |
| cumulative-flag | logical | Determines the form of the function. If [TRUE](TRUE.docx), then the cumulative distribution function is returned, which is the probability that there are at most number-successes successes; if [FALSE](FALSE.docx), the probability mass function is returned, which is the probability that there are number-successes successes. |

Return Type and Value: number – The individual term binomial distribution probability.

However, if

* number-successes < 0 or number-successes > number-trials, #NUM! is returned.
* success-probability < 0 or success-probability > 1, #NUM! is returned.

[Example:

BINOMDIST(6,10,0.5,FALSE) results in 0.205078125
BINOMDIST(6,10,0.5,TRUE) results in 0.828125

end example]