#### POISSON

[Syntax](Syntax.docx):

POISSON ( x , mean , cumulative-flag )

Description: Computes the Poisson distribution.

Mathematical Formula:

For cumulative-flag = [FALSE](FALSE.docx):

Equation

For cumulative-flag = [TRUE](TRUE.docx):

Equation

Arguments:

|  |  |  |
| --- | --- | --- |
| Name | Type | Description |
| [x](x.docx) | number | The number of events, truncated to an integer. |
| mean | number | The expected numeric value. |
| cumulative-flag | logical | Determines the form of the function. If [TRUE](TRUE.docx), POISSON returns the cumulative Poisson probability that the number of random events occurring will be between zero and x, inclusive; if [FALSE](FALSE.docx), it returns the Poisson probability mass function that the number of events occurring will be exactly x. |

Return Type and Value: number – The Poisson distribution.

However, if

* x < 0, #NUM! is returned.
* mean ≤ 0, #NUM! is returned.

[Example:  
  
POISSON(2,5,TRUE) results in 0.124652019  
POISSON(2,5,FALSE) results in 0.084224337  
  
end example]