**Factorial**

The Factorial of a non-negative integer *n* is denoted by . The factorial notation  was introduced by Christian Kramp in 1808.

Factorial on any number is the product of positive less than or equal to that number (*n*).





***Example***: 



**Double Factorial**

The product of all odd integers up to some odd positive integer *n* is called the double factorial of *n*, denoted by .







***Example***: 

For even positive integer *n* the double factorial is







***Example***: 

**Triple Factorial**

|  |  |
| --- | --- |
|  |  |
| 1 | 1 |
| 2 | 2 |
| 3 | 3 |
| 4 | 4 |
| 5 | 10 |
| 6 | 18 |
| 7 | 28 |
| 8 | 80 |
| 9 | 162 |
| 10 | 280 |

The product of all odd integers up to some odd positive integer *n* is called the triple factorial of *n*, denoted by .



***Example***: 







**Multifactorial**

A common related notation is to use multiple exclamation points to denote a multifactorial, the product of integers in steps of two , three 

 

 

