

# Binomio de Newton

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```
{r setup, include=FALSE} knitr::opts_chunk$set(echo = TRUE)
```

## PRODUCTO NOTABLE

la formula del producto notable es:

$$(a + b)^2 = a^2 + 2ab + b^2$$

#Funcion con R

```
binomioNewton2 = function(a,b){  
  a^2+2*a*b+b^2  
}  
binomioNewton2(1,2)  
binomioNewton2(2,1)
```

#BINOMIO DE NEWTON

$$(a, b)^n = \sum_{k=0}^n \binom{n}{k} \cdot a^{n-k} \cdot b^k = \binom{n}{0} * a^n * b^0 \dots \binom{n}{n} * a^0 * b^n$$

#Funcion en R

```
binomioNewton = function(a,b,n){  
  cumsum(choose(n,(0:n))*a^(n-(0:n))*b^(0:n)) [n+1]  
}  
binomioNewton(2,1,2)
```