Binomio de Newton

Curso de Estadistica Descriptiva

21/9/2021

PRODUCTO NOTABLE

la fórmula del producto notable es

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

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

```
## [1] 9
```

```
binomioNewton2(2,1)
```

```
## [1] 9
```

#BINOMIO DE NEWTON

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

Función con R

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

```
## [1] 9
```

```
binomioNewton(3,4,14)
```

```
## [1] 678223072849
```