```
#Lab 2
factorial(27)
#or
def fac(n):
    if n < 0:
        return -1
    elif n == 0:
        return 1
    else:
        return n * fac(n - 1)

fac(27)
```

```
10888869450418352160768000000
10888869450418352160768000000
```

```
binomial(8,5)
#or
def BiTheorem(n,k):
    x = ((fac(n))/(fac(k) * fac(n-k)))
    return x
BiTheorem(8,5)
```

```
56
56
```

```
D = Set(['a','b','c','d'])

Arrangements(D,2).list()
```

```
[['a', 'c'], ['a', 'b'], ['a', 'd'], ['c', 'a'], ['c', 'b'], ['c', 'd'],
['b', 'a'], ['b', 'c'], ['b', 'd'], ['d', 'a'], ['d', 'c'], ['d', 'b']]
```

```
A = [1,5,10,25,50]

B = WeightedIntegerVectors(99,A)

B.cardinality()
```

```
252
```