Tutorial 5

1. Define a function `f`, when used with `reduce` will return the element with maximum value in a sequence.

```
a = [10,30,20]
m = reduce(f,a)
print(m)  # 30 will be printed out
```

2. Given an integer number `n`, define a function `g`, when used with `reduce`, will calculate the factorial of `n`, which is `n!`.

```
n = 5
f = reduce(g,…) # Complete this code
print(f) # 120 will be printed out
```

3. Use `filter` and `reduce`, to calculate the sum of only positive numbers of a sequence. You can define any auxiliary function that you need.

```
a = [1, -2, 5, 6, 8]
t = reduce(…) # Complete this code
print(t) # 20 will be printed out
```

4. Use `map` and `reduce`, to calculate the sum of magnitudes of a sequence of complex numbers. You can define any auxiliary function that you need.

```
c = [3+4j, 5, 5j]
m = reduce(…) # Complete this code
print(m) # 15.0 will be printed out
```