Given a sequence of n values x1, x2, ..., xn and a window size k>0, the k-th moving average of the given sequence is defined as follows:

```
The moving average sequence has n-k+1 elements as shown below.
The moving averages with k=4 of a ten-value sequence (n=10) is shown belo
w
i 1 2 3 4 5 6 7 8 9 10
===== == == == == == == == == == ==
Input 10 20 30 40 50 60 70 80 90 100
y1 25 = (10+20+30+40)/4
y2 35 = (20+30+40+50)/4
y3 45 = (30+40+50+60)/4
y4 55 = (40+50+60+70)/4
y5 65 = (50+60+70+80)/4
y6 75 = (60+70+80+90)/4
y7 85 = (70+80+90+100)/4

Thus, the moving average sequence has n-k+1=10-4+1=7 values.
```

In [4]:
```
import numpy as np
def moving_average(num_list,window_size):
    moving_list=[]
    a_num_list = np.asarray(num_list)
    if window_size<a_num_list.size:
        ws=window_size
        ns=a_num_list.size-ws
        x=0
        while x<=ns:
            moving_list = moving_list + [round(a_num_list[x:x+ws].sum()/ws,2)]
            x=x+1
    else:
        moving_list=[a_num_list.sum()/a_num_list.size]
    return moving_list


moving_average([10,20,30,40,50,60,70,80,90,100],4)
```

Out[4]:
```
[25.0, 35.0, 45.0, 55.0, 65.0, 75.0, 85.0]
```

Write a function to find moving average in an array over a window:

```
Test it over [3, 5, 7, 2, 8, 10, 11, 65, 72, 81, 99, 100, 150] and window
 of 3.
```

In [5]:
```
moving_average([3, 5, 7, 2, 8, 10, 11, 65, 72, 81, 99, 100, 150],3)
```

Out[5]:
```
[5.0, 4.67, 5.67, 6.67, 9.67, 28.67, 49.33, 72.67, 84.0, 93.33, 116.33]
```

In [ ]: