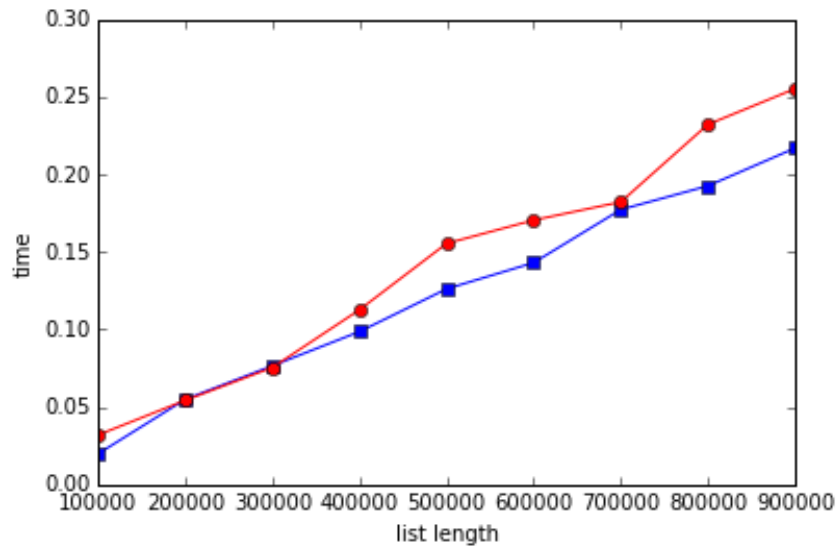**Excise 1**
See code

Excise 2
The time complexity of function p is **O(n)**.

Blue is plot for list, red is plot for numpy array.
Plots show time complexity becomes **larger** when I use **numpy array**.
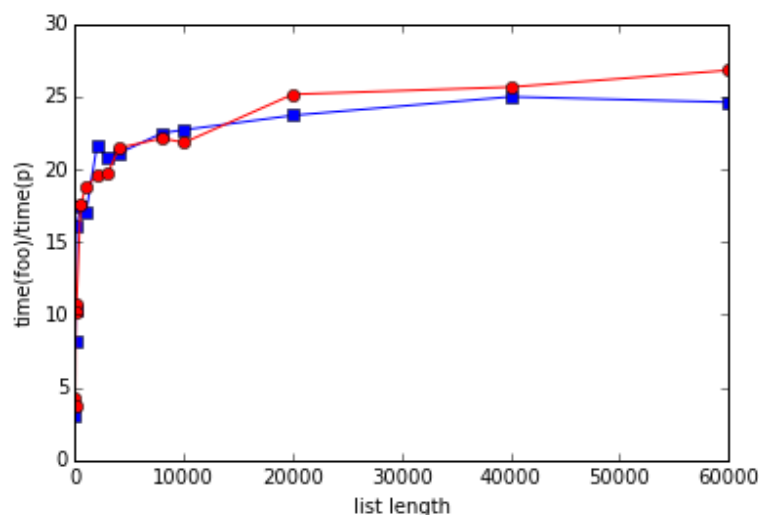
Excise 3
Function foo is to **sort input list a** when I call it with the first argument being a list a, the second being 0 and the third one being len(a).

The average time complexity is **O(n*log(n))**
Following is the plot: plots should look like log(n) relationship
Blue is plot for list, red is plot for numpy array. Plots show time complexity becomes **larger** when I use numpy array.
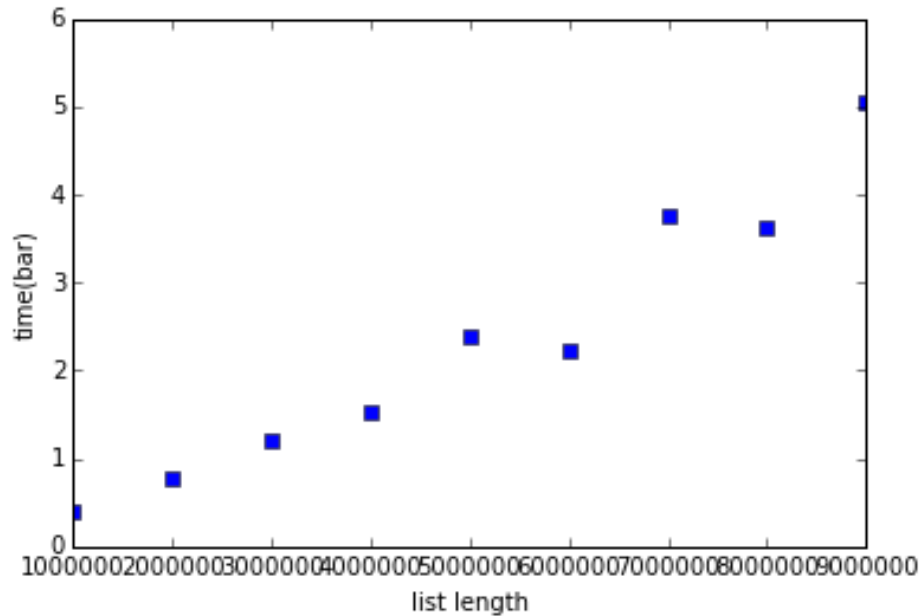
Excise 4
Function bar finds the **Kth smallest elemen**ts in list a.
Time complexity is **O(n)**
It only depends on **len(a)**. It doesn't depend on K.
Following is the plot:
Using fixed K=100, see relationship time vs. len(a): plots shows the relationship is linear

Using fixed n=1000, see relationship time vs. len(a): plots shows no relationship, random distributed