Ex1.1:

```
l = [1,7,3,7,5]
n=0
l.append(6)
for i in l:
    if (i == 7):
        n+=1
if n==0:
    print("pas  trouver")
else:
    print("7 aparait:",n,"fois")

sum = 0
x = 0

while x < len(l):
    sum += l[x]
    x+=1
moy = sum/len(l)
print("%2.2f"%(moy))
sum = 0
for j in l:
    sum += j
moy = sum/len(l)
print("%2.2f"%(moy))
```

s = alpha[5:-1]
>>FGHIJKLMNOPQRSTUVWXY
s = alpha[-5:24]
>>VWX
s = alpha[-5:-1]
>>VWXY

Ex1.2:

```
def reste(x):
    f = x % 2
    return f

x=int(input("Donner moi un entier: "))
print(reste(x))

liste1 = [1,2,3,4,5,6]
liste2 = [7,8,9,10,1,2]
liste3 = []
for i in liste1:
    if i in liste2:
        liste3.append(i)
print(liste3)
```

Pour pouvoir utiliser la bibliothèque Pylab il faut installer numpy puis faire :

```
from numpy import *
a = [[1, 0], [0, 1]]
b = [[4, 1], [2, 2]]
print(np.matmul(a, b))
```

Ex1.3:

```
def remove(p):
    p.pop(len(p)-1)
    return p
p = [1,2,3]
print(remove(p))


def Somme(X,Y):
    resultat = [[0,0],
                [0,0]]
    for i in range(len(X)):
       for j in range(len(X[0])):
           resultat[i][j] = X[i][j] + Y[i][j]
    return resultat

arbre= ['A',[
            ['B',[
                ['E',[]],
                ['F',[]],
                ]
            ]
            ['C',[]],
            ['D',[
                ['G',[]]
                ]
            ]
           ]
        ]
def ParcourIternactif(racine):
    while file_sommets == arbre:
        arbre_courrant=fiche_sommet.pop(0)
        sommet_courrant=arbre_courrant[0]
        enfant_courrant=arbre_courrant[1]
        print(sommet_courrant)
        for enfant in enfant_courant:
            if enfant:
                fiche_sommets.append(enfant)
filesommets = [arbre]
```

Ex1.4:

```
dict =  {"Dupont": ["Luca",16, 13 ],"Potter":[ "Harry",
  16, 17],"Bertrand": ["Toto",
  16, 8]}
dict["Parker"] = ["Peter",16,20]
print(dict)
dict.pop("Parker")
print(dict)
```