

# Question 1

```
import numpy as np
import math
n=int(input('number'))
y=np.random.rand(n,)
y2=np.random.randint(0,2,(n,))
c=0
for i in range(0,n):
    c=c+((y2[i]*math.log(y[i],2))+(1-y2[i])*(1-math.log(y[i],2)))
c=(-1/100)*c
print(c)
```

# Question 2

```
targ=int(input('enter the target value'))
n=int(input('number of elements in array'))
a=[]
count=1
for i in range(0,n,1):
    ele = int(input())
    a.append(ele)
list_num = {1:[0,0]}
for i in range(0,n,1):
    for j in range(0,n,1):
        if a[i]+a[j]==targ:
            list_num[count]=[i,j]
            count=count+1
print(list_num)
```