

```
1 import math
2 import random
3 import matplotlib.pyplot as plt
4
5 n = 100
6 x = []
7 y = []
8 lamda = 1
9
10 for i in range(n):
11     r = random.uniform(0,1);
12     x.append(r)
13     t = -(1/lamda)*math.log(1-r, math.e)
14     y.append(t)
15
16 b = max(x)
17 a = min(x)
18 R = b-a
19 intervals = int(math.ceil(math.sqrt(n)))
20 width = R/intervals
21
22 plt.subplot(2,1,1)
23 plt.hist(x,intervals, density = width)
24 plt.subplot(2,1,2)
25 plt.hist(y,intervals, density = width)
```