

Random walk (Brownian motion)

1 Python Script

```
1 import random
2 import matplotlib.pyplot as plt
3 from numpy import sin,cos, pi
4 from math import log,sqrt
5
6 x_l = []
7 y_l = []
8
9 x_i = 0
10 y_i = 0
11
12 for i in range(100):
13
14     delx = random.uniform(-1, 1)
15     x_l.append(delx)
16
17     dely = random.uniform(-1, 1)
18     y_l.append(dely)
19
20     x_i = x_i + delx
21     y_i = y_i + dely
22
23     plt.plot(x_l, y_l)
24
25 plt.xlabel("random num x")
26 plt.ylabel("random num y")
27 plt.show()
```

