

## 1 4 dice simulation

```
from itertools import product
import pandas as pd
import numpy as np
I = [1,2,3,4,5,6]

results_4 = pd.DataFrame([i+j+k+l for i,j,k,l in product(I,I,I,I)])
Y4_prob = results_4.value_counts()/len(I)**3

Y4_prob
```

14	0.675926
15	0.648148
13	0.648148
12	0.578704
16	0.578704
11	0.481481
17	0.481481
10	0.370370
18	0.370370
9	0.259259
19	0.259259
8	0.162037
20	0.162037
7	0.092593
21	0.092593
6	0.046296
22	0.046296
23	0.018519
5	0.018519
4	0.004630
24	0.004630

dtype: float64