

```
In [18]: n = 5
```

```
In [19]: from itertools import *  
percent = 0  
combs = []  
combs.extend([''.join(y) for x in combinations(product('LW', repeat = n), 2) f  
or y in x])
```

```
In [20]: combs  
mylist = list(set(combs))  
mylist
```

```
Out[20]: ['WLWLW',  
          'WWWWL',  
          'LLLLL',  
          'WLWWW',  
          'WWWLL',  
          'WLLLL',  
          'WWWLW',  
          'LLWWW',  
          'WWWWW',  
          'WLLLL',  
          'WWLWL',  
          'WLLWL',  
          'WWLLW',  
          'LLWLL',  
          'LWWWW',  
          'LWLWL',  
          'LWLLW',  
          'LWWLW',  
          'LLLLL',  
          'WLWLL',  
          'LLWWL',  
          'LLLWW',  
          'WLWWL',  
          'LWWWL',  
          'WLLWW',  
          'LLWLW',  
          'LLLLL',  
          'LWLLL',  
          'LWWLL',  
          'WWLWW',  
          'LWLWW',  
          'WWLLL']
```

```
In [21]: for i in mylist:
        if 'LL' in i:
            percent = percent + (0.2 ** i.count('L') * 0.8**(n - i.count('L')))
            print(percent)

0.0012800000000000003
0.021760000000000001
0.023040000000000001
0.043520000000000002
0.048640000000000002
0.053760000000000016
0.074240000000000003
0.075520000000000003
0.080640000000000003
0.081920000000000003
0.087040000000000003
0.092160000000000003
0.097280000000000003
0.117760000000000005
0.122880000000000004
0.123200000000000005
0.124480000000000005
0.129600000000000005
0.134720000000000006
```

```
In [22]: percent
```

```
Out[22]: 0.134720000000000006
```

```
In [ ]:
```