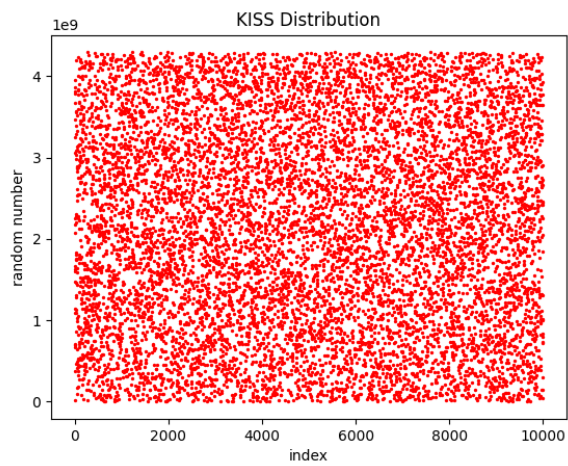
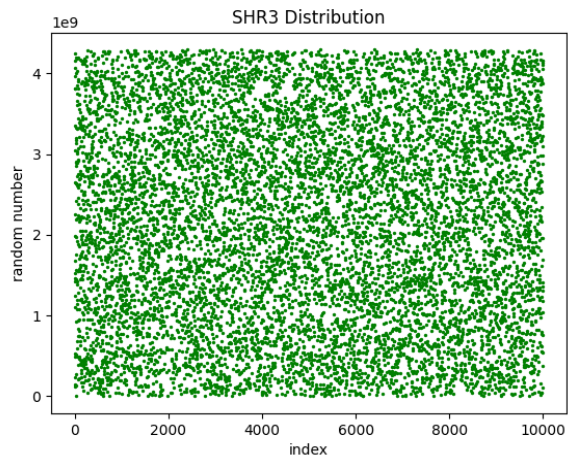
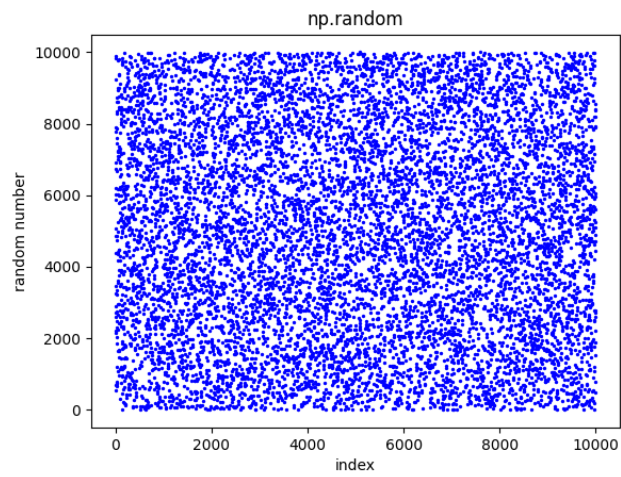
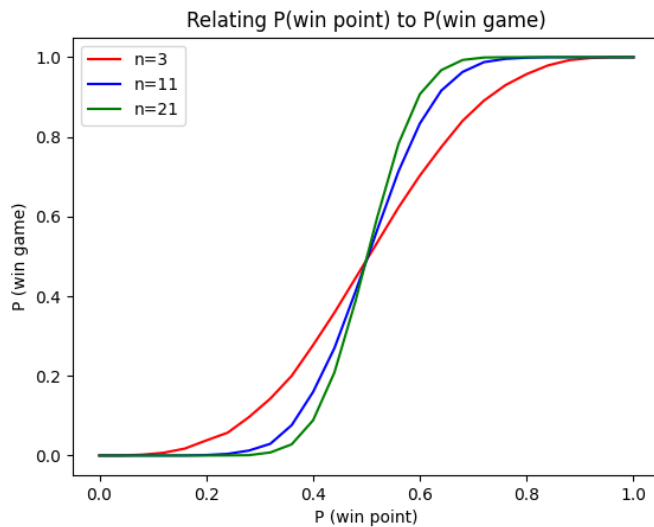


a)



b)



As  $n$  gets larger, the curve gets steeper. This makes sense because the players have more opportunities to win with more points to play for, despite the changing probabilities of winning.

For  $n = 3$ : (0.201, 0.035), (0.5, 0.477), (0.801, 0.940)

For  $n = 11$ : (0.201, -0.003), (0.5, 0.495), (0.801, 0.997)

For  $n = 21$ : (0.201, 0.003), (0.5, 0.460), (0.801, 1.003)

As the probability of winning (x-axis) gets higher, the probability of winning the entire game gets higher, too.

c)

```
[(base) ucsc-guest-169-233-121-190:Program1_AnyaRajan anyarajan$ python3 pokemon.py  
[0.2, 53.12464, 11.367108, 0.04, 0.678576]  
[0.25, 58.874750000000006, 19.6615, 0.04172499999999999, 0.6068333333333333]  
103.795  
182.5016
```