

## Problem #1

### Hashing:

Do both results agree with the hashing statistics distribution?

Yes they both do

Show the comparison and analysis?      Analysis is attached in the problem folder

Does it compare to theory?

Yes it does since the calculations demonstrate in the simulation how there is a 27% possibility of collision and the simulation proves it

```
Collision Probability: 0.279297
Number of times 0 appears: 247
Number of times 1 appears: 122
Number of times 2 appears: 78
Number of times 3 appears: 41
Number of times 4 appears: 13
Number of times 5 appears: 7
Number of times 6 appears: 4
Number of times 7 appears: 0
Number of times 8 appears: 0
Number of times 9 appears: 0
The maximum number of collisions is: 6

RUN SUCCESSFUL (total time: 86ms)
```