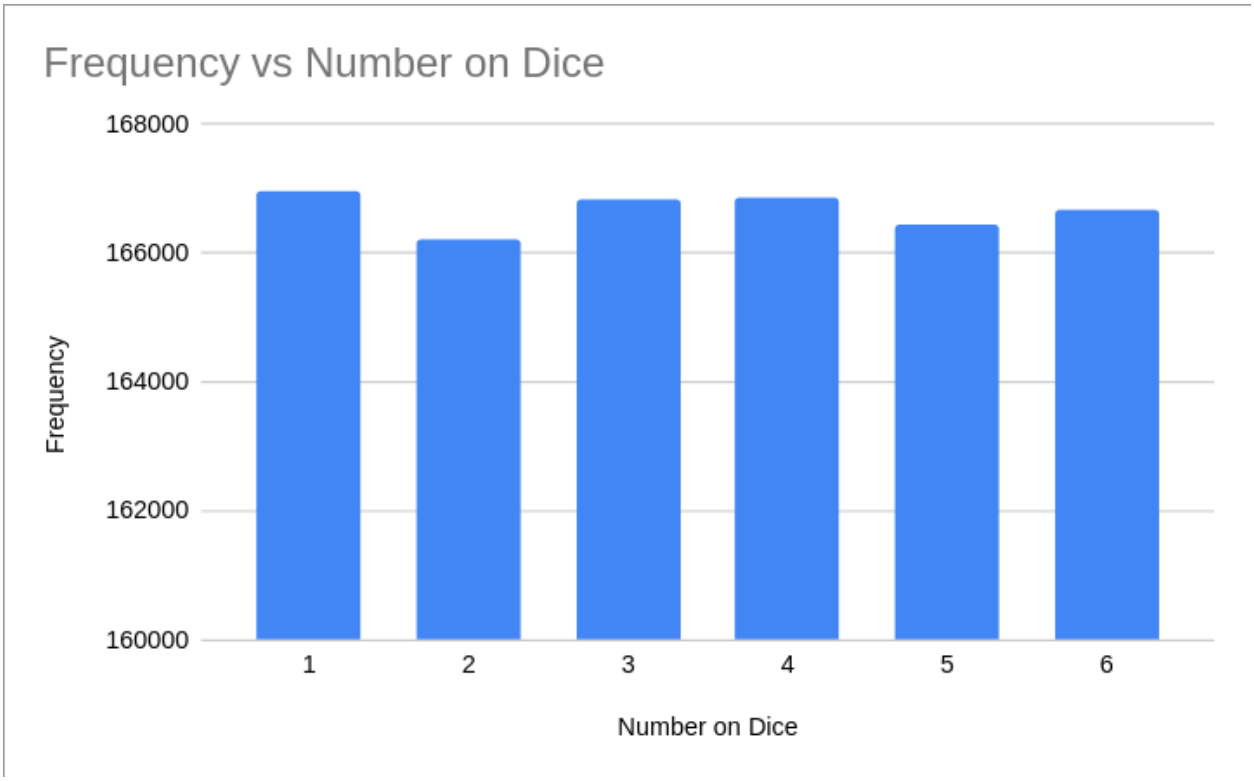
Q1-3 REPORT

Q1:



Since there are 1,000,000 trials of the dice throw,

Ideally, number of times each i(1<=I<=6) appears on the dice is 1000000/6

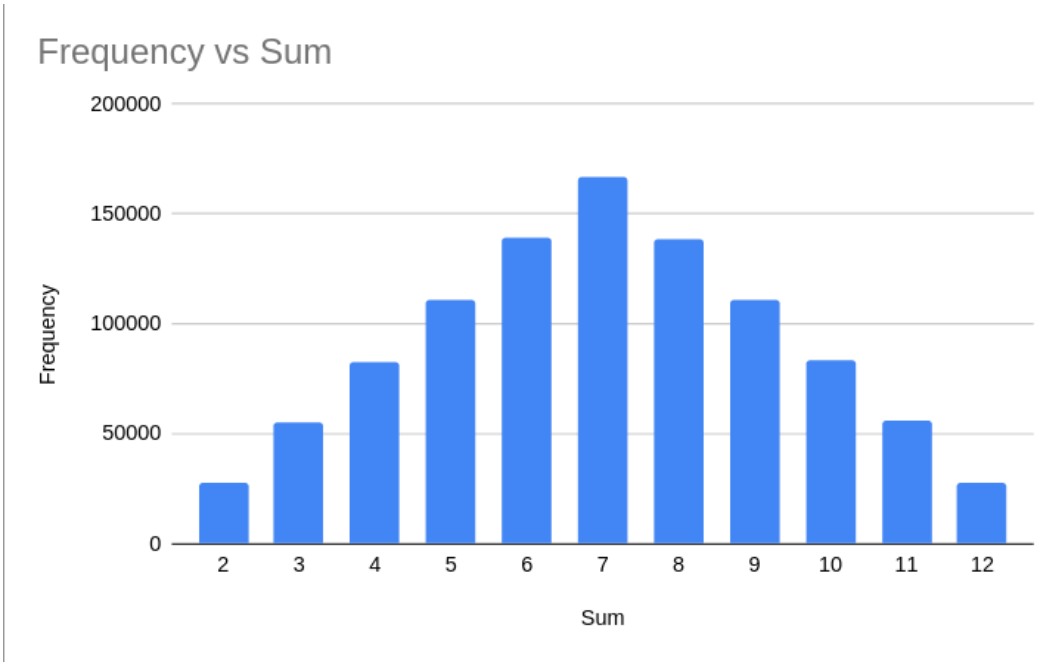
= 166666.666667

And experimentally,

Number on Dice	Frequency
1	166959
2	166213
3	166843
4	166861
5	166454
6	166670

So each experimental frequency value is <1000 numbers away from the ideal frequency.

Q2:



Here,

Sum	Frequency
2	27747
3	55127
4	83010
5	111411
6	139448
7	166506
8	138678
9	111153
10	83649
11	55775
12	27496

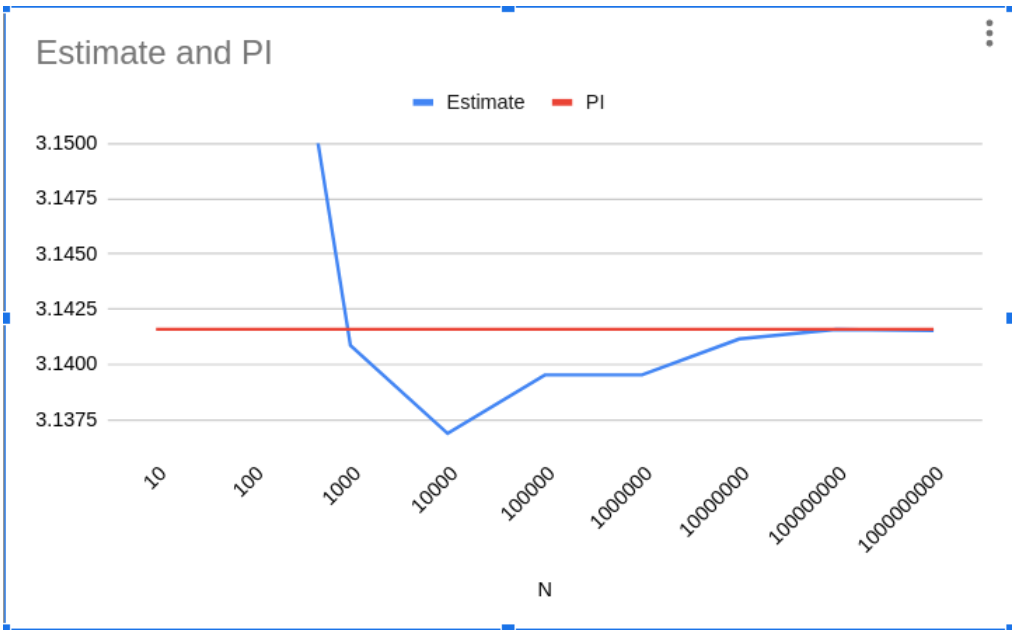
But theoretically,

Sum	Frequency
2	27777.7777778
3	55555.5555556
4	83333.3333333
5	111111.111111
6	138888.888889

7	166666.666667
8	138888.888889
9	111111.111111
10	83333.3333333
11	55555.5555556
12	27777.7777778

Again, experimental values differ from ideal values by <1000.

Q3:



N	Estimate
10	3.272727
100	3.168317
1000	3.140859
10000	3.136886
100000	3.139529
1000000	3.139533
10000000	3.141157
100000000	3.141583
1000000000	3.141529

The actual value of PI is around 3.141592654 , so as N increases, the accuracy of the estimated value of PI also increases.