Inserting numbers 1-30

Numbers	Hash value	# of probes to insert
1	1	1
2	2	1
3	3	1
4	4	1
5	5	1
6	6	1
7	7	1
8	8	1
9	9	1
10	0	1
11	1	2
12	2	2
13	3	2
14	4	2
15	5	2
16	6	2
17	7	2
18	8	2
19	9	2
20	0	3
21	1	3
22	2	3
23	3	3
24	4	3
25	5	3
26	6	3
27	7	3
28	8	3
29	9	3
30	0	3

Since each number has to be check against the hash table to see if it exists already, the MEMBER function checks through however many numbers are already in the corresponding bucket + 1 since it doesn't spot until the one after is NULL. The table for deletion look exactly the same but going from the bottom to the top. If the numbers were deleted in order instead, the number of probes would start at 3 for numbers 1-10, be at 2 for 11-20 and 1 for 21-30.

The value for the constant would come out to around O(1+n/b) where n is the number of elements and b is the number of buckets. In this implementation it is O(1+n/10). Which can be seen in the data the number of probes only increased after n went over 10 so that formula holds.