



Dealing with Collisions

a

-  $O(n)$
-  $O(2) = O(1)$

b

54, 23, 67, 88, 39, 75, 49, 5

- separate chaining

hash	key
0	39,
1	
2	54, 67
3	
4	
5	5
6	
7	
8	
9	
10	23, 88, 75, 49,
11	
12	

- linear probing

0	1	2	3	4	5	6	7	8	9	10	11	12
39	49	54	67		5					23	88	75

- quadratic probing

0	1	2	3	4	5	6	7	8	9	10	11	12
39	75	54	67		5	49				23	88	

e

$1^2 = 1, 2^2 = 4, 3^2 = 3, 4^2 = 4, 5^2 = 1, 6^2 = 0$

0, 1, 3, 4, 6

0	1	2	3	4	5
0	1	-	3	4	-

6