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Weekday: Week 2- Day 7

Answer to the Q. No. R-2.19:

$$H(i) = (2i + 5) \bmod 11$$

Key	H(K)	Index	Key
12	7	0	Ø
44	5	1	20
13	9	2	Ø
88	5	3	Ø
23	7	4	16, 5
94	6	5	44, 88, 11
11	5	6	94, 83
39	6	7	12, 13
20	1	8	Ø
16	4	9	13
5	4	10	Ø

Answer to the Q. No. R-2.20:

Index	Key
0	<b>11</b>
1	<b>39</b>
2	<b>20</b>
3	<b>5</b>
4	16
5	44
6	<b>88</b>
7	12
8	23
9	13
10	<b>94</b>

Answer to the Q. No. R-2.21:

Index	Key
0	
1	<b>20</b>
2	<b>16</b>
3	<b>11</b>
4	39
5	44
6	<b>88</b>
7	12
8	23
9	13
10	<b>94</b>

Answer to the Q. No. R-2.22:

Index	Key	Probes
0	12	7
2	44	5
3	13	9
4	88	3
5	23	1
6	94	6
7	11	8
8	39	4
9	20	2
10	16	0
11	5	10

Algorithm removeElement(H, key)

Input: H is hashTable and key is the key of H

Output: return the element

(key, element) <- H.findElement(key)

If key != NO\_SUCH\_KEY then

key <- Available

return element

Linear probing handles collision by putting the item in the next empty or available block. So, it is necessary to use a special marker to represent the deleted elements. If we remove it then we will not find the value that might be put in the next block. So search will be end as it will find an empty and not available block.