

please note that the first column indicate key and second one for the number of probes

	Key	Probs
0	54	2
1	21	3
2	29	7
3	25	1
4	43	6
5	27	1
6	38	2
7	16	3
8	49	4
9	30	2
10	32	1

QUESTION 2

6 points

✓ Saved

hash function $H(\text{key}) = \text{key} \% 11$ to store the sequence of keys: 27, 25, 38, 16, 32, 54, 21, 49, 30, 29, 43 in the hash table. Use the following collision resolution strategies:
 Separate chaining (**List position starts at 0**). Fill in the following table (**note**: make sure you fill all the table, scroll the window all the way to the right):

27	25	38	16	32	54	21	49
5	3	5	5	10	10	10	5
0	0	1	2	0	1	2	3

6 points

✓ Saved

3 in the hash table. Use the following collision resolution strategies:
(e, scroll the window all the way to the right):

	32	54	21	49	30	29	43
	10	10	10	5	8	7	10
	0	1	2	3	0	0	3

QUESTION 3

6 points

✓ Saved

Use the hash function $H(\text{key}) = \text{key} \% 7$ to store the sequence of keys: 27, 25, 38, 16, 32, 54, 21, 49, 30, 29, 43 in the hash table. Use the following collision resolution strategies:

3. Coalesced chaining with cell size 4 and address region size 7. Fill in the following table (put -1 if there is no next element) (**note:** make sure you fill all the table, scroll the window all the way to the right):

Key	27	25	38	16	32	54	21
Table Position	6	4	3	2	10	5	0
Index of next element	-1	10	-1	8	-1	-1	9

in the hash table. Use the following collision resolution strategies:

(no next element) (**note**: make sure you fill all the table, scroll the window all the way to the right):

	32	54		21	49	30	29	43
	10	5		0	9	8	1	7
	-1	-1		9	-1	-1	7	-1

QUESTION 4

2 points

✓ Saved

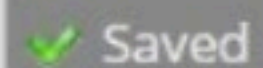
Consider the following heap represented as an array: 6, 12, 18, 30, 16, 22. Choose the correct answer for every operation (all operations are done on the above heap).

Heap after inserting 8:

- ☒ 6, 12, 8, 30, 16, 22, 18
- ☐ 6, 12, 18, 30, 16, 22, 8
- ☐ 6, 12, 18, 30, 16, 8, 22
- ☐ 6, 8, 18, 30, 16, 22, 12
- ☐ None

QUESTION 5

2 points



Consider the following heap represented as an array: 6, 12, 18, 30, 16, 22. Choose the correct answer for every operation (all operations are done on the above heap).

Heap after inserting 24:

- ☐ 6, 12, 24, 30, 16, 22, 18
- ☐ None
- ☒ 6, 12, 18, 30, 16, 22, 24
- ☐ 6, 12, 18, 30, 16, 24, 22
- ☐ 6, 12, 16, 18, 30, 22, 24

QUESTION 6

2 points

✓ Saved

Consider the following heap represented as an array: 6, 12, 18, 30, 16, 22. Choose the correct answer for every operation (all operations are done on the above heap).

Heap after inserting 2:

- ☐ 2, 12, 6, 30, 16, 18, 22
- ☐ 6, 12, 18, 30, 16, 22, 2
- ☐ 2, 6, 12, 30, 16, 22, 18
- ☐ 2, 12, 6, 16, 30, 22, 18
- ☒ None

QUESTION 7

2 points


✓ Saved

Consider the following heap represented as an array: 6, 12, 18, 30, 16, 22. Choose the correct answer for every operation (all operations are done on the above heap).

Heap after deleting one key:

- ☐ 12, 30, 18, 22, 16
- ☐ 22, 12, 18, 30, 16
- ☐ None
- ☒ 12, 16, 18, 30, 22
- ☐ 12, 22, 18, 30, 16

QUESTION 8

4 points  Saved

Consider the following heap represented as an array: 6, 12, 18, 30, 16, 22. Choose the correct answer for every operation (all operations are done on the above heap).

Heap after deleting two keys:

- ☐ None
- ☐ 16, 18, 22, 30
- ☐ 22, 16, 18, 30
- ☒ 16, 22, 18, 30
- ☐ 16, 18, 30, 22