## **Summer 2025 Section B: Advanced Data Structures**

2) (5 pts) ALG (Hash Tables)

Consider a hash table that uses the **quadratic probing technique** with the following hash function f(x) = (3x+4)%11. (The hash table size is 11). If we insert the values 22, 11, 44, 32, 10, 21, and 33 into the table, in that order, show where these values would end up in the table.

Index	0	1	2	3	4	5	6	7	8	9	10
Value		32	10		22	11			44	33	21

Grading: 1 pt total for 22, 11 and 44

1 pt total for 32 and 10 1 pt for placement of 21 2 pts for placement of 33

To get the point, all the items in the list for that point have to be in the correct slot.