Practice

- Given the following hash table, trace the steps for find(3). The hash function is $h(k)=k\%7$ (m=7) and quadratic probing was used to hash the items.

- $\underline{14}\ \underline{8}\ \underline{21}\ \underline{2}\ \underline{7}\ \underline{\ \ }\ \underline{\ \ }$

    0 1 2 3 4 5 6

- $h(3) = 3$

- $(h(3)+1^2)\%7 \rightarrow$ loc 4

- $(h(3)+2^2)\%7 \rightarrow$ loc 0

- $(h(3)+3^2)\%7 \rightarrow$ loc 5

empty $\Rightarrow$ return not found

Practice

- Given the following hash table, trace the steps for remove(21) followed by find(7). The hash function is $h(k)=k\%7$ (m=7) and linear probing was used to hash the items.

remove(21): $h(21)=0$
- loc 0 occupied but not 21
- loc 1 " " " "
- loc 2 & find 21
  remove flag for 21
  ↳ unoccupied location in cluster

- $\underline{14}\ \underline{8}\ \underline{\cancel{21}}^{R}\ \underline{2}\ \underline{7}\ \underline{\ }\ \underline{\ }$
    0 1 2 3 4 5 6

find(7): $h(7)=0$
Check probing sequence loc: 0, 1, 2 (in cluster w/ remove flag), 3, 4 find 7 at location 4 (location in cluster)