Open Addressing: Linear Probing

$h' : U \to \{0, 1 \ldots, m-1\}$

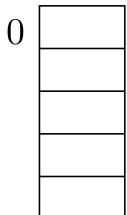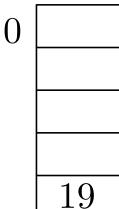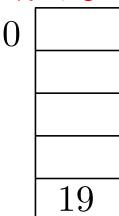|	
0	

- Hash Function is $h(x, i) = (h'(x) + i) \bmod m$ where $h'(x)$ is original hash function.

- Insert: Attempts insertion at $h'(x)$, then $h'(x) + 1$, $h'(x) + 2$, etc,. (wrapping around to 0 after reaching end of table) until empty slot is found and x inserted there.

- In our case $h'(x) = x \bmod 15$

- Need to insert $19, 6, 18, 34, 25, 4$ in that order

(table rows labeled 0, 5, 10, 14)

Open Addressing: Linear Probing

$h' : U \rightarrow \{0, 1 \ldots, m - 1\}$

0	
	19
5	
10	
14	

- Hash Function is $h(x, i) = (h'(x) + i) \bmod m$ where $h'(x)$ is original hash function.

- Insert: Attempts insertion at $h'(x)$, then $h'(x) + 1$, $h'(x) + 2$, etc,. (wrapping around to 0 after reaching end of table) until empty slot is found and x inserted there.

- In our case $h'(x) = x \bmod 15$

- Need to insert $19, 6, 18, 34, 25, 4$ in that order

Open Addressing: Linear Probing

$$h' : U \to \{0, 1 \ldots, m-1\}$$

0
19
5
6
10
14

- Hash Function is $h(x, i) = (h'(x) + i) \bmod m$ where $h'(x)$ is original hash function.

- Insert: Attempts insertion at $h'(x)$, then $h'(x) + 1$, $h'(x) + 2$, etc,. (wrapping around to 0 after reaching end of table) until empty slot is found and x inserted there.

- In our case $h'(x) = x \bmod 15$

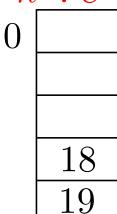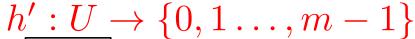- Need to insert $19, 6, 18, 34, 25, 4$ in that order

Open Addressing: Linear Probing

$h' : U \to \{0, 1 \ldots, m-1\}$

0	
	18
	19
5	
	6
10	
14	

- Hash Function is $h(x, i) = (h'(x) + i) \bmod m$ where $h'(x)$ is original hash function.

- Insert: Attempts insertion at $h'(x)$, then $h'(x) + 1$, $h'(x) + 2$, etc,. (wrapping around to 0 after reaching end of table) until empty slot is found and x inserted there.

- In our case $h'(x) = x \bmod 15$
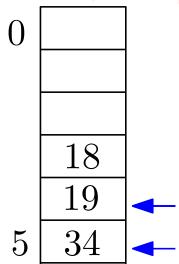
- Need to insert $19, 6, 18, 34, 25, 4$ in that order

Open Addressing: Linear Probing

$h' : U \to \{0, 1 \ldots, m-1\}$

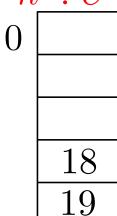|	
0	
	18
	19 ←
5	34 ←
	6
10	
14	

- Hash Function is $h(x, i) = (h'(x) + i) \bmod m$ where $h'(x)$ is original hash function.

- Insert: Attempts insertion at $h'(x)$, then $h'(x) + 1$, $h'(x) + 2$, etc,. (wrapping around to 0 after reaching end of table) until empty slot is found and x inserted there.

- In our case $h'(x) = x \bmod 15$

- Need to insert $19, 6, 18, 34, 25, 4$ in that order

Open Addressing: Linear Probing

$$h' : U \to \{0, 1 \ldots, m-1\}$$

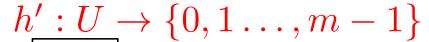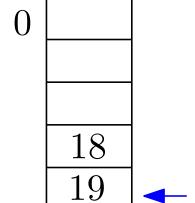|	
0	
	18
	19
5	34
	6
10	25
14	

- Hash Function is $h(x, i) = (h'(x) + i) \bmod m$ where $h'(x)$ is original hash function.

- Insert: Attempts insertion at $h'(x)$, then $h'(x) + 1$, $h'(x) + 2$, etc,. (wrapping around to 0 after reaching end of table) until empty slot is found and x inserted there.

- In our case $h'(x) = x \bmod 15$

- Need to insert $19, 6, 18, 34, 25, 4$ in that order

Open Addressing: Linear Probing

$h' : U \to \{0, 1 \ldots, m-1\}$

0	
	18
	19
5	34
	6
	4
10	25
14	

- Hash Function is $h(x, i) = (h'(x) + i) \bmod m$ where $h'(x)$ is original hash function.

- Insert: Attempts insertion at $h'(x)$, then $h'(x) + 1$, $h'(x) + 2$, etc,. (wrapping around to 0 after reaching end of table) until empty slot is found and x inserted there.

- In our case $h'(x) = x \bmod 15$

- Need to insert $19, 6, 18, 34, 25, 4$ in that order