$h(k) = 3k + 4 \bmod 8$

Linear Probing: $h(k, i) = (h(k) + i) \bmod m$

[41, 30, 74, 55, 68, 39, 64, 72]

Index	Element	
0	68	Insert 41: $h(41) = 7$, insert 41 to 7
1	55	Insert 30: $h(30) = 6$, insert 30 to 6
2	74	Insert 74: $h(74) = 2$, insert 74 to 2
3	39	Insert 55: $h(55) = 1$, insert 55 to 1
4	64	Insert 68: $h(68) = 0$, insert 68 to 0
5	72	Insert 39: $h(39) = 1$ (occupied) $+ 1$ (occupied) $+ 1$ (collision) $= 3$, insert 39 to 3
6	30	Insert 64: $h(64) = 4$, insert 64 to 4
7	41	Insert 72: $h(72) = 4$ (occupied) $+ 1$ (collision) $= 5$, insert 72 to 5

Quadratic Probing: $h(k, i) = (h(k) + i^2) \bmod m$

$h(k) = (3k) \bmod 8$

[19, 29, 16, 26, 14, 24, 13, 23]

Index	Element	
0	16	Insert 19: $h(19) = 1$, insert 19 to 1
1	19	Insert 29: $h(29) = 7$, insert 29 to 7
2	14	Insert 16: $h(16) = 0$, insert 16 to 0
3	13	Insert 26: $h(26) = 6$, insert 26 to 6
4	24	Insert 14: $h(14) = 2$, insert 14 to 2
5	23	Insert 24: $h(24) = 0$ (occupied) $+ 1^2$ (occupied)
6	26	try $h(24) = 0$ (occupied) $+ 2^2$ (collision) $= 4$, insert 24 to 4
7	29	Insert 13: $h(13) = 7$ (occupied) $+ 1^2$ (occupied)
		try $h(13) = 7$ (occupied) $+ 2^2$ (collision) $= 3$, insert 13 to 3
		Insert 23: $h(23) = 5$, insert 23 to 5

Double hashing: $h(k, i) = (h_1(k) + h_2(k) \times i) \bmod m$

$h_1(k) = k \bmod 8$, $h_2(k) = (5k+3) \bmod 7 + 1$

[22, 14, 39, 23, 80, 53, 49, 50]

Index	Element	
0	80	Insert 22: $h(22) = 6$, insert 22 to 6
1	49	Insert 14: $h(14) = (6\text{(occupied)} + 4\text{(collision)}) \bmod 8 = 2$, insert 14 to 2
2	14	Insert 39: $h(39) = 7$, insert 39 to 7
3	53	Insert 23: $h(23) = (7\text{(occupied)} + 7\text{(collision)}) \bmod 8 = 6$ (occupied)
4	50	try $(7\text{(occupied)} + 14\text{(collision)}) \bmod 8 = 5$, insert 23 to 5
5	23	Insert 80: $h(80) = 0$, insert 80 to 0
6	22	Insert 53: $h(53) = (5\text{(occupied)} + 3\text{(collision)}) \bmod 8 = 0$ (occupied)
7	39	try $(5\text{(occupied)} + 6\text{(collision)}) \bmod 8 = 3$, insert 53 to 3
		Insert 49: $h(49) = 1$, insert 49 to 1
		Insert 50: $h(50) = (2\text{(occupied)} + 7\text{(collision)}) \bmod 8 = 1$ (occupied)
		try $(2\text{(occupied)} + 14\text{(collision)}) \bmod 8 = 0$ (occupied)
		try $(2\text{(occupied)} + 21\text{(collision)}) \bmod 8 = 7$ (occupied)
		try $(2\text{(occupied)} + 28\text{(collision)}) \bmod 8 = 6$ (occupied)
		try $(2\text{(occupied)} + 35\text{(collision)}) \bmod 8 = 5$ (occupied)
		try $(2\text{(occupied)} + 42\text{(collision)}) \bmod 8 = 4$, insert 50 to 4

Cuckoo hashing: $h_1(k) = (3k+1) \bmod 7$

$h_2(k) = (\lfloor 5k/2 \rfloor + 3) \bmod 7$

[9, 23, 24, 15, 87, 20, 12, 47]

Table 1

Index	Element
0	23
1	
2	47
3	87
4	15
5	20
6	

Table 2

Index	Element
0	24
1	
2	
3	
4	9
5	12
6	

Insert 9: $h_1(9) = 0$, insert 9 to 0 at table 1

Insert 23: $h_1(23) = 0$ (occupied), $h_2(9) = 4$, insert 9 to 4 at table 2

Insert 24: $h_1(24) = 3$, insert 24 to 3 at table 1

Insert 15: $h_1(15) = 4$, insert 15 to 4 at table 1

Insert 87: $h_1(87) = 3$ (occupied), $h_2(24) = 0$, insert 24 to 0 at table 2

Insert 20: $h_1(20) = 5$, insert 20 to 5 at table 1

Insert 12: $h_1(12) = 2$, insert 12 to 2 at table 1

Insert 47: $h_1(47) = 2$ (occupied), $h_2(12) = 5$, insert 12 to 5 at table 2