Linear Probing: h(k, i) = (h(k) + i) mod m	
Numbers to insert	[41, 30, 74, 55, 68, 39, 64, 72]
Table capacity	8
Hash function	h(k) = (3k + 4) mod 8

Insert 41: h(41) = 7 -> insert to index 7
Insert 30: h(30) = 6 -> insert to index 6
Insert 74: h(74) = 2 -> insert to index 2
Insert 55: h(55) = 1 -> insert to index 1
Insert 68: h(68) = 0 -> insert to index 0
Insert 39: h(39) = 1 (occupied)
+1 (collision) = 2 (occupied)
+1 (collision) = 3 -> insert to index 3
Insert 64: h(64) = 4 -> insert to index 4
Insert 72: h(72) = 4 (occupied)
+1 (collision) = 5 -> insert to index 5

Index	Element
0	68
1	55
2	74
3	39
4	64
5	72
6	30
7	41

Quadratic Probing: h(k, i) = (h(k) + i^2) mod m	
Numbers to insert	[19, 29, 16, 26, 14, 24, 13, 23]
Table capacity	8
Hash function	h(k) = (3k) mod 8

Insert 19: h(19) = 1 -> insert to index 1
Insert 29: h(29) = 7 -> insert to index 7
Insert 16: h(16) = 0 -> insert to index 0
Insert 26: h(26) = 6 -> insert to index 6
Insert 14: h(14) = 2 -> insert to index 2
Insert 24: h(24) = 0 (occupied)
+1 (collision) = 1 (occupied)
+3 (collision) = 4 -> insert to index 4
Insert 13: h(13) = 7 (occupied)
+1 (collision) = 0 (occupied)
+3 (collision) = 3 -> insert to index 3
Insert 23: h(23) = 5 (occupied)

Index	Element
0	16
1	19
2	14
3	13
4	24
5	23
6	26
7	29

Double Hashing: h(k, i) = (h1(k) + i * h2(k)) mod m	
Numbers to insert	[22, 14, 39, 23, 80, 53, 49, 50]

Table capacity	8
Hash functions	h1(k) = (k) mod 8, h2(k) = ((5k + 3) mod 7) + 1

Insert 22: h(22) = 6 -> insert to index 6
Insert 14: h(14) = 6 (occupied)
(+ 1 * 4) % 8 = 2 -> insert to index 2
Insert 39: h(39) = 7 -> insert to index 7
Insert 23: h(23) = 7 (occupied)
(7 + 1 * 7) % 8 = 6 (occupied)
(7 + 2 * 7) % 8 = 5 -> insert to index 5
Insert 80: h(80) = 0 -> insert to index 0
Insert 53: h(53) = 5 (occupied)
(5 + 1 * 3) % 8 = 0 (occupied)
(5 + 2 * 3) % 8 = 3 -> insert to index 3
Insert 49: h(49) = 1 -> insert to index 1
Insert 50: h(50) = 2 (occupied)
(2 + 1 * 2) % 8 = 4 -> insert to index 4

Index	Element
0	80
1	49
2	14
3	53
4	50
5	23
6	22
7	39

Cuckoo Hashing: h1(k) for table 1, h2(k) for table 2

Numbers to insert	[9, 23, 24, 15, 87, 20, 12, 47]

Table capacity	14 (7 for each sub-table)
Hash functions	h1(k) = (3k + 1) mod 7, h2(k) = (floor(5k / 2) + 3) mod 7

Insert 9: h1(9) = 0 -> insert to table 1 index 0
Insert 23: h1(23) = 0 -> insert to table 1 index 0
h2(9) = 25 % 7 = 4 -> insert to table 2 index 4
Insert 24: h1(24) = 3 -> insert to table 1 index 3
Insert 15: h1(15) = 4 -> insert to table 1 index 4
Insert 87: h1(87) = 3 -> insert to table 1 index 3
h2(24) = 63 % 7 = 0 -> insert to table 2 index 0
Insert 20: h1(20) = 5 -> insert to table 1 index 5
Insert 12: h1(12) = 2 -> insert to table 1 index 2
Insert 47: h1(47) = 2 -> insert to table 1 index 2
h2(12) = 33 % 7 = 5 -> insert to table 2 index 5

Table 1

Index	Element
0	23
1	
2	47
3	87
4	15
5	20
6	
7	

Table 2

Index	Element
0	24
1	
2	
3	
4	9
5	12
6	
7	