CMSC 123 Data Structures
Pen-and-Paper Exercise on Hashing

Given the following input: hash table size m = 23 and
keys = {34, 56, 2, 86, 59, 11, 20, 17, 39, 1, 15}, insert them into the
hash table using:

Linear Probing:	$h(k) = (k \% m + i) \% m$
Quadratic Probing:	$h(k) = (k \% m + i^2) \% m$
Double Hashing:	$h(k) = (k \% m + i*h_2(k)) \% m$
	$h_2(k) = 5 - (k \% 5)$

Linear Probing		Quadratic Probing		Double Hashing	
0		0		0	17
1	1	1	1	1	1
2	2	2	2	2	2
3		3		3	
4		4		4	
5		5		5	
6		6		6	
7		7		7	15
8		8		8	
9		9		9	
10	56	10	56	10	56
11	34	11	34	11	34
12	11	12	11	12	
13	59	13	59	13	59
14		14		14	
15	15	15	15	15	11
16	39	16	39	16	39
17	86	17	86	17	86
18	17	18	17	18	
19		19		19	
20	20	20	20	20	20
21		21		21	
22		22		22	