**1.** Store the given keys (in the given order) in an initially empty hash table. The size of table is 6 and it resolves collision by chaining strategy.

13 18 23 25 17 2 1 19 11 0 14 8 31 17 22 29 4

**2.** Compute the average nuber of tests performed when searching for a key in the completed table in the problem 1 . Suppose that all keys which are in the table are searched for equally often and that it is never searched for keys which are not in the table.

**3.**  Store the given keys (in the given order) in an initially empty hash table. The table resolves the collisions by open addressing and linear probing with step size 2.

a. The size of table is 13 b. The size of table is 17 c. The size of table is 21

17 22 15 23 18 8 7 9 34 22 18 14

**4.** Store the given keys in problem 3 (in the given order) in an initially empty hash table. The table resolves the collisions by open addressing and double hashing. Compare the effectivity of the tables in cases a. - d.

a. The size of table is 13, second hash function is h2(k) = 1 + k % 3,

b. The size of table is 13, second hash function is h2(k) = 1 + k % 5,

c. The size of table is 17, second hash function is h2(k) = 1 + k % 11,

d. The size of table is 21, second hash function is h2(k) = 1 + k % 5,