

## CSCI 204 Hashing Activity 1

Student name(s) \_\_\_\_\_

1. Assume an initially empty hash table with 11 spots. The primary hashing function is the modulo function, i.e.,  $h(k) = k \% 11$ . Show the contents of the hash table after the following keys are inserted in the given order, assuming the indicated type of probe is used: 67, 815, 45, 39, 2, 901, 34.
  - a. Linear probe with  $c = 1$
  - b. Linear probe with  $c = 3$
  - c. Quadratic probe
  - d. Double hashing with  $hp(k) = (k * 3) \% 7$
2. In the above insertions, how many probes are needed to insert the entire sequence of numbers for each different probe functions (a-d)?