

ADS Homework 11

Problem 11.1

a)

The input sequence is $\langle 3, 10, 2, 4 \rangle$

$$h_1(3) = 3 \bmod 5 = 3$$

We do not have a collision, so we move on to the next item.

$$h_1(10) = 10 \bmod 5 = 0$$

We also do not have a collision.

$$h_1(2) = 2 \bmod 5 = 2$$

No collision either.

$$h_1(4) = 4 \bmod 5 = 4$$

Still no collision here.

The resulting hash table looks like this:

10		2	3	4
0	1	2	3	4

We did not have any collisions, so we did not have to use the second hash function.