

```
/*  
 * NAME: Kuangyi Yang  
 * ID: A53083212  
 * LOGIN: cs12fig  
 */
```

Part1

1.

```
0:  
1: 4371  
2:  
3: 1323  
4: 6173  
5: 9679  
6:  
7: 4344  
8:  
9: 4199
```

1989 cannot hash anymore

```
=====
```

2.

```
0: 11  
1: 39  
2: 20  
3: 5  
4: 16  
5: 44  
6: 88  
7: 12  
8: 23  
9: 13  
10: 94
```

```
=====
```

3.

0:
1: 28, 19, 10
2: 20
3: 12
4:
5: 5
6: 15, 33
7:
8: 17

=====

4.
 $3 \cdot 32^5 + 15 \cdot 32^4 + 6 \cdot 32^3 + 6 \cdot 32^2 + 5 \cdot 32^1 + 5 \cdot 32^0$
= 116594853

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5.
It's not a good idea to store an ordered dictionary in a hash table because we will lose the information of the order, array is a good idea to store ordered dictionary