

Name : _____ Date : _____

A+ Maps Worksheet 1

Answer each of the following questions. (100 points)

1. Is the following code [legal / illegal]? `Map a = new Map();`
2. Is the following code [legal / illegal]? `Collection b = new Map();`
3. Is the following code [legal / illegal]? `Collection c = new TreeMap();`
4. Is the following code [legal / illegal]? `Map d = new HashMap();`
5. Is the following code [legal / illegal]? `SortedMap e = new TreeMap();`
6. Is the following code [legal / illegal]? `Map<Byte,Byte> f = new TreeMap<Byte,Byte>();`
7. What is the `bigO` for a `TreeMap`? [$O(\log_2 N)$ / $O(1)$ / $O(N)$]
8. What is the `bigO` for a `HashMap`? [$O(\log_2 N)$ / $O(1)$ / $O(N)$]
9. `TreeMap` can only store Objects that implement which interface? _____

10. What is output by the code at right?

```
Map<String,Integer> map = new TreeMap<String,Integer>();
map.put("8",9);
map.put("8",8);
map.put("8",7);
map.put("5",9);
map.put("6",8);
map.put("2",12);
out.println(map);
```

11. What is output by the code at right?

```
Map<String,Integer> m = new TreeMap<String,Integer>();
out.println(m.put("8",1));
out.println(m.put("8",2));
m.put("8",3);
m.put("5",4);
m.put("6",5);
m.put("2",6);
out.println(m);
```