

Answer each of the following questions.

1. Is the following code [legal / illegal]?

Collection a = new Map();

2. Is the following code [legal / illegal]?

Map b = new TreeMap();

3. Is the following code [legal / illegal]?

Collection c = new TreeMap();

4. Is the following code [legal / illegal]?

Map d = new HashMap();

5. What method is used to put items into a Map?

.put (E key, E value)

6. What method is used to get values from a Map?

.get (E key)

7. What is output by the code at right?

1
7
null

```
Map<String,Integer> mOne = new TreeMap<String,Integer>();
mOne.put("8",1);
mOne.put("5",2);
mOne.put("6",7);
out.println(mOne.get("8"));
out.println(mOne.get("6"));
out.println(mOne.get("3"));
```

8. What is output by the code at right?

10
null
20

```
Map<String,Integer> mTwo = new TreeMap<String,Integer>();
mTwo.put("8",10);
out.println(mTwo.put("8",12));
mTwo.put("8",15);
out.println(mTwo.put("5",18));
mTwo.put("5",20);
out.println(mTwo.put("5",23));
```

9. What is output by the code at right?

8=2,
5=9,
6=8,
2=12
3

```
Map<String,Integer> map = new TreeMap<String,Integer>();
map.put("8",6);
map.put("8",3);
map.put("8",2);
map.put("5",9);
map.put("6",8);
map.put("2",12);
out.println(map);
```

10. What is output by the code at right?

2=1,
4=1,
5=1,
6=1,
8=3
3

```
Map<String,Integer> treeMap;
treeMap = new TreeMap<String,Integer>();
String[] list = {"4","5","8","2","8","8","6"};
for(String s : list)
    if(treeMap.get(s)==null)
        treeMap.put(s,1);
    else
        treeMap.put(s, treeMap.get(s)+1);
out.println(treeMap);
```