

1.

```
public static int mod(int a, int b) {  
    assert b > 0 : "Violation of: b > 0";  
  
    if (a > 0 && b > 0) {  
        while (a >= b) {  
            a = a - b;  
        }  
    } else if (a < 0 && b > 0) {  
        while (-a >= b || a <= b) {  
            a = a + b;  
        }  
    } else if (a < 0 && b < 0) {  
        while (a <= b) {  
            a = a - b;  
        }  
    }  
  
    return a;  
}
```

2.

i. Bucket Integer Hashed

0	432
1	17
2	54
3	-788
4	-101
5	84
6	0
7	-6
8	-195
9	90

ii. Bucket Integer Hashed

0	90
1	-195
2	-6
3	0

4	84
5	-101
6	-788
7	54
8	17
9	432