# Alawn's Problem

#### **Time limit:** 3.0s **Memory limit:** 256M

Alawn has a length N array of pairs  $(a_i,b_i)$ . Initially,  $a_i=b_i$  for all i.

Alawn loves arrays that satisfy the following property:

• The a values can be sorted by only swapping elements i and j where  $b_i \times b_j \leq V$ .

A *modification* to the array consists of decreasing element i's  $b_i$  value by 1. Can you determine the minimum number of modifications required to turn the array of pairs into one that Alawn loves?

### **Input Specification**

The first line will contain T ( $1 \le T \le 10$ ), the number of test cases. T test cases follow.

For each test case, the first line will contain two integers N, V  $(1 \le N \le 10^5, 1 \le V \le 10^{18})$ , the number of elements in the array and the special value V.

The second line will contain N integers,  $a_i$  ( $1 \le a_i \le 10^9$ ), the elements of the array. **Recall that**  $a_i = b_i$  **initially.** 

### **Output Specification**

For each case, output the minimum number of modifications required on its own line.

## **Sample Input**

```
2
5 1
1 2 3 4 5
5 4
1 2 5 3 6
```

### **Sample Output**

```
0 1
```