Geometric Sequence
Input File: geometric.txt

A geometric sequence is a sequence where each progressive term is found by multiplying the previous term by a constant value. A geometric sequence could be 1, 2, 4, 8, ..., where the common ratio between is 2, or it could be 120, 60, 30, 15, ..., where the common ratio is 0.5. For this problem, you can assume that the common ratio is a positive integer. Your task is to find the length of the longest geometric sequence from a given sorted array of integers. The terms of the sequence do not need to be adjacent to each other.

Input:

The first line contains an integer N. The following N lines can each contain anywhere between 1 and 20 integers, each separated by a space. These integers are guaranteed to be sorted from least to greatest.

Output:

For each test case, output an integer representing the length of the longest geometric sequence that can be formed from the given integers.

Example Input:

```
3
1 2 3 4 5 6 7 8 9 10
2 3 4 5 8 9 10 16 20 27 40 81 120 243
3 5 7 11 23 31 101
```

Example Output:

```
4
5
1
```