

1642 Magical GCD

The *Magical GCD* of a nonempty sequence of positive integers is defined as the product of its length and the greatest common divisor of all its elements.

Given a sequence (a_1, \dots, a_n) , find the largest possible Magical GCD of its connected subsequence.

Input

The first line of input contains the number of test cases T . The descriptions of the test cases follow:

The description of each test case starts with a line containing a single integer n , $1 \leq n \leq 100000$. The next line contains the sequence a_1, a_2, \dots, a_n , $1 \leq a_i \leq 10^{12}$.

Output

For each test case output one line containing a single integer: the largest Magical GCD of a connected subsequence of the input sequence.

Sample Input

```
1
5
30 60 20 20 20
```

Sample Output

```
80
```