Problem C: 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 $(a_1, ..., a_n)$, 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, $1 \leqslant n \leqslant 100\,000$. The next line contains the sequence $a_1, a_2, ..., a_n$, $1 \leqslant a_i \leqslant 10^{12}$.

Output

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

Example

For an example input	the correct answer is:
1 5 30 60 20 20 20	80