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 \((a_1, \ldots, a_n)\), 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 \(n\), \(1 \leq n \leq 100,000\). The next line contains the sequence \(a_1, a_2, \ldots, a_n\), \(1 \leq a_i \leq 10^{12}\).

Output

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

Example

<table>
<thead>
<tr>
<th>For an example input</th>
<th>the correct answer is:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 5 30 60 20 20 20</td>
<td>80</td>
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</tbody>
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