Problem C. C

Time limit	500 ms
Code length Limit	50000 B
OS	Linux

Read problem statements in Bengali, Mandarin Chinese, Russian, and Vietnamese as well.

You are given a range of positive integers $L, L+1, \ldots R$. Find an integer X greater than 1 which is coprime with all the integers in this range (does not share any common factors greater than 1 with any of these integers). In addition, X must not exceed $2 \cdot 10^9$.

If there are multiple solutions satisfying these conditions, you may find any one of them. It is guaranteed that for the given constraints, at least one such integer X exists.

For example, if $L = 16$ and $R = 17$, then $X = 9$ is coprime with both 16 and 17. However, if $L = 6$ and $R = 12$ instead, then $X = 9$ shares a common factor 3 with 6 and 12 and a common factor 9 with 9.

Input

- The first line of the input contains a single integer T denoting the number of test cases. The description of T test cases follows.
- The first and only line of each test case contains two space-separated integers L and R.

Output

For each test case, print a single line containing one integer X which satisfies the above conditions.

Constraints

- $1 \leq T \leq 1,000$
- $2 \leq L \leq R \leq 10^6$

Subtasks

Subtask #1 (100 points): original constraints

Sample 1

Input	Output
3 16 17 16 17 973360 973432	9 27 79

Example case 1: $X = 9$ does not share any common factors with 16 and 17.

Example case 2: $X = 27$ does not share any common factors with 16 and 17.

Example case 3: $X = 79$ does not share any common factors with any of the integers $973360, 973361, \ldots, 973432$.