Day 1: Tower Breakers

Two players (numbered 1 and 2) are playing a game of Tower Breakers! The rules of the game are as follows:

- Player 1 always moves first, and both players always play optimally.
- Initially there are N towers, where each tower is of height M.
- The players move in alternating turns. In each turn, a player can choose a tower of height X and reduce its height to Y, where $1 \leq Y < X$ and Y evenly divides X.
- If the current player is unable to make any move, they lose the game.

Given the values of N and M, can you determine who will win? If the first player wins, print 1; otherwise, print 2.

Input Format

The first line contains a single integer, T, denoting the number of test cases.
Each of the T subsequent lines describes a test case in the form of 2 space-separated integers denoting the respective values for N and M.

Constraints

- $1 \leq T \leq 100$
- $1 \leq N, M \leq 10^6$

Output Format

For each test case, print a single integer (i.e., either 1 or 2) denoting the winner on a new line.

Sample Input

```
2
2 2
1 4
```

Sample Output

```
2
1
```

Explanation

We'll refer to player 1 as P_1 and player 2 as P_2

In the first test case, P_1 chooses one of the two towers and reduces it to 1. Then P_2 reduces the remaining tower to a height of 1. As both towers now have height 1, P_1 cannot make a move so P_2 is the winner and we print 2 on a new line.

In the second test case, there is only one tower of height 4. P_1 can reduce it to a height of either 1 or 2, but P_1 chooses 1 as both players always choose optimally. Because P_2 has no possible move, P_1 wins and we print 1 on a new line.