Problem E
Guess Which
Time limit: 2 seconds

You are playing a guessing game against an opponent. At the start of the game, each player secretly picks an integer between 1 and 200, inclusive. Players alternate turns, where on each turn, the active player announces a nonempty set of integers that are still possible for the opponent's secret number and the opposing player then truthfully declares whether their secret number is or is not in that set. The first player to narrow the opponent's possibilities down to exactly one number wins, and the game ends immediately. It is not necessary to announce a set of size one consisting of only the opponent's secret number—it is sufficient to narrow the remaining possibilities down to exactly one.

At some point during this game, your opponent's secret number has been narrowed down to n possibilities, and your own secret number has been narrowed down to m possibilities. Both players know n and m. Each player's secret number is equally likely to be any of the remaining possibilities. It is your turn to make a guess. Determine the number of integers you should include in your guess set in order to maximize the probability that you ultimately win the game, assuming your opponent plays perfectly to maximize their own probability of winning. If multiple guess sizes yield the same maximum winning probability, output the smallest such size.

Input

The input contains two integers n and m ($2 \leq n \leq 200$, $2 \leq m \leq 200$), the number of remaining possibilities for your opponent's secret number and your own secret number, respectively.

Output

Output a single integer: the number of integers to include in your guess to maximize your probability of winning, with ties broken in favor of the smallest such value.

Sample Input 1	Sample Output 1
9 10	4

Sample Input 2	Sample Output 2
50 2	1

Sample Input 3	Sample Output 3
3 4	1

Sample Input 4	Sample Output 4
4 3	2

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