CMPUT 275 - Tangible Computing
Morning Problem: Pizza Cutting

Description

Bob is very particular, he only likes when his pizza is cut into a power of n slices. In fact, he despises any such pizza that is not to his liking so much so that he throws it out. The problem is, Bob has trouble with math and he throws out perfect pizzas all the time... how wasteful!

Bob would like someone to write a program that tells him whether or not a pizza of m slices is cut into a power of n so he can stop needlessly throwing out his favourite food.

Your goal is to write this program for Bob, given a pizza cut into m slices you must determine whether or not there are a power of n slices of pizza.

Input

The first and only line of input contains two space-separated integers, n ($1 \leq n \leq 500$), the base Bob likes, and m ($1 \leq m \leq 1,000,000$), the amount of slices of pizza.

Output

You are to output one line containing either "GOOD" if there are a power of n slices of pizza, or "BAD" if there are not.

Sample Input 1

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2 4
```

Sample Output 1

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GOOD
```

Explanation:

There are 4 slices of pizza which is 2^2, so Bob will not throw out this pizza.

Sample Input 2

```
5 3
```

Sample Output 2

```
BAD
```

Explanation:

There are only 3 slices of pizza, which is in between 5^0 and 5^1, so this is a bad pizza.