

# Pea Pattern

## Problem ID: peapattern

Do you see the pattern in the following sequence of numbers?

1, 11, 21, 1112, 3112, 211213, 312213, . . .

Each term describes the makeup of the previous term in the list. For example, the term 3112 indicates that the previous term consisted of three 1's (that's the 31 in 3112) and one 2 (that's the 12 in 3112). The next term after 3112 indicates that it contains two 1's, one 2 and one 3. This is an example of a *pea pattern*.

A pea pattern can start with any number. For example, if we start with the number 20902 the sequence would proceed 202219, 10113219, 1041121319, and so on. Note that digits with no occurrences in the previous number are skipped in the next element of the sequence.

We know what you're thinking. You're wondering if 101011213141516171829 appears in the sequence starting with 20902. Well, this is your lucky day because you're about to find out.

### Input

Input consists of a single line containing two positive integers  $n$  and  $m$ , where  $n$  is the starting value for the sequence and  $m$  is a target value. Both values will lie between 0 and  $10^{100} - 1$ .

### Output

If  $m$  appears in the pea pattern that starts with  $n$ , display its position in the list, where the initial value is in position 1. If  $m$  does not appear in the sequence, display `Does not appear`. We believe that all of these patterns converge on a repeating sequence within 100 numbers, but if you find a sequence with more than 100 numbers in it, display `I'm bored`.

#### Sample Input 1

1 3112

#### Sample Output 1

5

#### Sample Input 2

1 3113

#### Sample Output 2

Does not appear

#### Sample Input 3

20902 101011213141516171829

#### Sample Output 3

10