

Pertre

PERTRE

Every summer Pertre comes to visit her grandmother in the field. This summer, he has a huge wart. Her grandmother knows that one should treat warts when the moon is waning. Therefore, Pertre have to know the time when the moon is there.

The lunar cycle lasts 30 days. The size of the visible part of the moon (in units Pertre) for each day is 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 14, 13, 12, 11, 10, 9, 8, 7, 6, 5, 4, 3, 2, 1 and then repeats the cycle, so that after the second one goes back 0.1, 2,.....

Since there is no internet in the field, Pertre has been watching the moon during several days (n) consecutive and for each of these days wrote the size of the visible part of the moon. Help him to find out if the moon is waxing or waning in the next day or if this can not be determined by the data you have.

[SPANISH VERSION](#)

Input

The first line of the input contains a single integer n ($1 \leq n \leq 92$) - the number of consecutive days Pertre was seeing the size of the visible part of the moon.

The second line contains n integers a_i ($0 \leq a_i \leq 15$) - Records Pertre.

It is guaranteed that the input data is constant.

Output

If Pertre can be sure that the size of the visible part of the moon in the day $n + 1$ is smaller than the size of the visible part in the day n , then print "MENGUANTE" in the only line of output . If he can be sure that the size of the visible part will increase, then print "RISING". If it is impossible to determine what exactly will happen to the moon, print -1.

Example

Input:

5

3 4 5 6 7

Output:

CRECIENTE

Input:

7

12 13 14 15 14 13 12

Output:

MENGUANTE

Input:

1

8

Output:

-1

Nota

In the first example, the size of the moon in the next day will be 8, therefore the answer is "growing".

In the second example, the size of the moon in the next day will be 11, so the answer is "MENGUANTE".

In the third example, you can not determine what the size of the moon as it can be 7 or 9, therefore the answer is -1.