

Kripto

Little Petar is playing a very frustrating online game, and is eager to advance on the leaderboard of best players. He has decided to use his hacker abilities and send an HTTP request for a score change. However, he hadn't anticipated that the committee had installed a new manner of protection against hackers -- requests with unrealistically high scores are actually written in the database modulo M (where M is a given number). Petar managed to find out the value of M , however he is still unfamiliar with the modulo operation, hence he has asked for your help in determining how many points will he achieve for a given request.

Input

The first and only line of the standard input contains two integers N and M , the score Petar has requested and the committee's modulo.

Output

Write to the standard output a single line containing the number of achieved points for the given request.

Example

Input:

15 7

Output:

1

Explanation

Petar has requested the score of 15, however the committee considers all scores above 7 to be unrealistic; as such, the value actually recorded will be equal to the score modulo 7, i.e. 1 in this case.

Constraints

- $0 \leq N \leq 10^{100000}$
- $1 \leq M \leq 10^{18}$