6. Problem Statement

Cody has a sequence of characters N. He likes a sequence if it contains his favourite sequence as a substring. Given the sequence and his favourite sequence F, check whether the favourite sequence is present in the sequence.

Input

The first line of input contains a single line T, which represents the number of test cases. Each test case consists of 2 strings separated by space N and F respectively.

Output

Print "Yes" if the sequence contains the favorite sequence in it, otherwise print "No".

Constraints

1<=T<=10. 1<=|N|,|F|<=100. All the characters are lowercase alphabets.

Sample Input

2

abcde abc

pqrst pr

Sample Output

Yes

No

7. Problem Statement

There are N students in a class and Teacher want to divide these students into some groups . Teacher told that groups consisting of two or less students not allowed , so Teacher want to have as many groups consisting of three or more students as possible. Divide the students so that the number of groups consisting of three or more students is maximized.

Input

Single integer N

Output

Maximum number of groups can be formed

Constraints

1<=N<100000

Sample Input

6

Sample Output

2

8. Problem Statement

All numbers in NumberLand are standing in a circle for a dancing ceremony. Every number needs a dancing partner. Dancing partner of any number is the number which is standing radially opposite to it in the circle. The numbers are from 0 to N-1. A certain number X wants to know who will be its dancing partner. Please help X.

Input

Two positive integers denoting the value of N and X.

Output

Print the number radially opposite to X in a circle of N numbers.

Constraints

$4 \leq N \leq 20$ $0 \leq X < N$

Sample Input

8 2

Sample Output

6

9. Problem Statement

A happy string is a string in which each character is lexicographically greater than its next character. You are given a positive integer N as an input. You need to print the smallest lexicographical string possible of length N. NOTE: All characters in a happy string are in lowercase.

Input

A single integer N.

Output

Print the lexicographically smallest string of length N.

Constraints

$1 \leq N \leq 26$

Sample Input

2

Sample Output

Ba

10. Problem Statement

Tom is a scientist. He uses huge machines for complex calculations. There is a problem, the machines takes input as Fahrenheit and Tom has the temperatures in Degree Celsius. As he is busy with his work, he asks your help to convert Degree Celsius to Fahrenheit.

Input

The first and only line of the input consists of a single integer T denoting temperature in Degree Celsius.

Output

Print an integer denoting temperature in Fahrenheit.

Constraints

0<=T<=1000

Sample Input

100

Sample Output

212