

Fizz-fizz

n students are standing in a line (that goes from left to right) playing a game of fizz-fizz. The rules of fizz-fizz are, the students will go in order from left to right and say something, the i th student from the left will say the number i if i is not divisible by 3, otherwise the i th student will say fizz multiple times, they will say it one time for every time you can divide it by 3 (with no remainder).

For example, if there are nine students, they will say (in this exact order):

1, 2, fizz, 4, 5, fizz, 7, 8, fizz-fizz

The 9th student will say fizz twice because 9 is divisible by $3 * 3$.

Given n , output what the students say and in the order that they say it.

Input

The first and only line will contain a single integer n .

$1 \leq n \leq 10,000$

Output

You should output n lines, the i th of which should contain what the i th student says. Should they say 'fizz' more than once then output them with hyphens in-between (i.e. fizz-fizz-fizz for students like the 27th student).

Example

Input:

9

Output:

Output 1

1

2

fizz

4

5

fizz

7

8

fizz-fizz