

Fizz-fizz

University of Melbourne Competitive Programming Club

Problem Statement

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 9^{th} student will say fizz twice because 9 is divisible by 3^2 .

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 .

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).

Constraints

You may assume you can perform around $2 \cdot 10^6$ basic operations per second.

$$1 \leq n \leq 10^4$$

Sample Cases

Input 1

9

Output 1

1
2
fizz
4
5
fizz
7
8
fizz-fizz

Input 2

27

Output 2

1
2
fizz
4
5
fizz
7
8
fizz-fizz
10
11
fizz
13
14

fizz
16
17
fizz-fizz
19
20
fizz
22
23
fizz
25
26
fizz-fizz-fizz