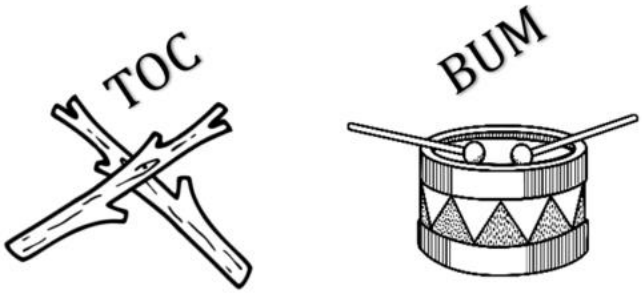
21 Toc-Bum

11 points

Introduction

The Toc-Bum is a simple mathematical game played during the first years of school. Maybe you remember it from your school years and this problem will provide you with good memories.



The game is usually played by a small group of girls and boys in a circle and it consists of each participant counting a number out loud starting from number 1. Before starting a couple of numbers are defined as special, they are the TOC and the BUM numbers. For example, the 5 is replaced by the TOC and the 7 by the BUM. Therefore, counting numbers aloud must quote each natural number by its name except those that can be composed by a series of TOCs and BUMs.

If we define the number 5 as TOC and the number 7 as BUM we would have this sequence:

1, 2, 3, 4, TOC (5), 6, BUM (7), 8, 9, TOC TOC (since 5 + 5 = 10), 11, TOC BUM (5 + 7 = 12),13, BUM BUM (7 + 7 = 14), TOC TOC TOC (5 + 5 + 5 = 15),16, TOC TOC BUM (5 + 5 + 7 = 17), 18, TOC BUM BUM (5 + 7 + 7 = 19), TOC TOC TOC TOC (5 + 5 + 5 + 5 = 20), BUM BUM BUM (7 + 7 + 7 = 21), ...

Can you write a simple program that given three different positive numbers (the TOC, the BUM and a target number) outputs the corresponding number following the TOC-BUM rule.

> HINT: In some cases, there are several solutions for a given target number. Consider this example, 6 as TOC, 8 as BUM and 40 as the target number. The possible solutions are: TOC TOC TOC TOC BUM BUM (6 + 6 + 6 + 6 + 8 + 8) BUM BUM BUM BUM BUM (8 + 8 + 8 + 8 + 8) In such cases the solution considered as valid (in bold) is the one that first tries to use only the TOC number, secondly tries to combine the usage of TOC and BUM numbers and finally tries to use only the BUM number.

Input

The input will contain three lines with three different positive numbers greater or equal than 3. The first number will be the TOC, the second number will be the BUM and the third one the target number.

Output

Print out the TOC-BUM sequence to represent the number or if it is not possible just output the target number.

Example 1

Input

```
5
7
9
```

Output

```
9
```

Example 2

Input

```
5
7
19
```

Output

```
TOC
BUM
BUM
```

Example 3

Input

```
3
4
6
```

Output

```
TOC
TOC
```