

## Problem F

# Frontend Failure

Time limit: 2 seconds

Memory limit: 512 megabytes

### Problem Description

LYS is a senior backend web developer at BambooFox LLC, a company that provides one of the finest penetration testing services in the world. (Disclaimer: it doesn't actually exist.) His job (backend development) includes server-side scripting, database management, etc.; in general, any logic behind the interface of a website, usually far away on the internet, beyond a user's reach.

Frontend development, on the other hand, is the construction of components that users directly interact with. Usually, this refers to the interface of a website. A crucial part of frontend development is design, as appearance and usability can both greatly affect user experiences and thus determine a website's quality.

Speaking of web design, many developers work with CSS (Cascading Style Sheets), a very popular language used to tweak the layout and style of a web page. Although simple and easy to learn, there are only a few people on earth that managed to achieve true mastery of its mechanisms. Unfortunately, LYS, as a professional backend developer, is not one of them.

For some reasons, LYS has to create the frontend of a new website, consisting of one single page. The page is horizontally divided into  $n$  sections numbered from 1 to  $n$ , where the  $i^{\text{th}}$  section has its width set to  $w_i$  pixels using CSS (negative values are possible because of transforms, but we don't care about how it works here). A segment of length  $l$  is defined as a set of  $l$  sections with contiguous indices, and the width of a segment is defined as the total width of all sections belonging to it.

After the website is published, LYS has been receiving complaints regarding the layout of his page. He quickly realized that it was the sections' widths that were causing problems. Every user that visits the page will select some segment of length  $m$  and will become unsatisfied if the segment's width is not exactly  $t$ , as this is not harmonic. Additionally, if any section has zero width or has width with absolute value greater than  $10^9$  pixels, the user will also be unsatisfied.

LYS wishes to fix this issue by changing the sections' widths. However, dealing with layout design and CSS doesn't seem like an easy task to him. Can you do it instead?

### Input Format

The first line contains an integer  $T$ , denoting the number of test cases.

Then  $T$  test cases follow, each containing a line with three space-separated integers  $n, m, t$ .

## Output Format

Output  $T$  lines. The  $i^{\text{th}}$  line should be the answer to the  $i^{\text{th}}$  case, which consists of  $n$  space-separated integers  $w_1, w_2, \dots, w_n$ , the widths of sections that can satisfy every possible user, in pixels. If there are multiple answers, you may output any of them.

## Technical Specification

- $1 \leq T \leq 100$
- $1 \leq m \leq n \leq 10^4$
- $1 \leq t \leq 10^9$
- $t \geq m$
- This problem has an output limit of 20MB (20,971,520 characters).

### Sample Input 1

```
3
10 1 1
10 2 4
10 2 2
```

### Sample Output 1

```
1 1 1 1 1 1 1 1 1
2 2 2 2 2 2 2 2 2
1 1 1 1 1 1 1 1 1
```

## Hint

This problem is easy!

Let's see the second sample test case:

- $[2, 2, 2, 2, 2, 2, 2, 2, 2, 2]$  and  $[1, 3, 1, 3, 1, 3, 1, 3, 1, 3]$  are both valid answers because for each segment of length 2, the sum of its widths is 4.
- $[2, 2, 2, 2, 2, 2, 3, 1, 3, 1]$  is not a valid answer because the widths of the 6<sup>th</sup> and 7<sup>th</sup> sections sum to 5 instead of 4.
- $[0, 4, 0, 4, 0, 4, 0, 4, 0, 4]$  is not a valid answer. Although the width of segments are correct, there are sections with zero width so users will be unsatisfied.