

## Problem K. Kilk Not

Input file: *standard input*  
Output file: *standard output*  
Time limit: 2 seconds  
Memory limit: 512 mebibytes

You are given a string  $s$  consisting of zeros (0), ones (1), and question marks (?).

The number of question marks in  $s$  is exactly  $a + b$ .

Replace  $a$  question marks with zeros and  $b$  question marks with ones to obtain a binary string  $t$ . Let  $f(t)$  be the length of the longest substring of  $t$  consisting of equal digits (e.g. 11111 or 0000).

Your task is to minimize  $f(t)$ .

### Input

Each test contains multiple test cases. The first line contains the number of test cases  $t$  ( $1 \leq t \leq 10^5$ ). Description of the test cases follows.

The first line of each test case contains three integers  $n$ ,  $a$ , and  $b$  ( $1 \leq n \leq 250\,000$ ;  $0 \leq a$ ;  $0 \leq b$ ).

The second line contains a string  $s$  of length  $n$  consisting of characters 0, 1, and ?. The number of question marks in  $s$  is equal to  $a + b$ .

It is guaranteed that the sum of  $n$  over all test cases does not exceed 250 000.

### Output

For each test case, print two lines.

In the first line, print a single integer  $f(t)$ , denoting the smallest possible length of the longest substring of  $t$  consisting of equal digits.

In the second line, print any string  $t$  achieving this value of  $f(t)$  itself.

### Example

<i>standard input</i>	<i>standard output</i>
4	1
7 1 2	0101010
0?01??0	10
10 5 0	0000000000
?000??0?0?	3
11 0 0	11001110100
11001110100	4
15 2 4	110111101111001
?1?11?1??11100?	