

Problem K: Kettle Symphony

Henya is a genius. Everyone loves Henya, not only because she has an IQ of 199, but also because she can create the sound of boiling water kettles with her lovely voice, which is very pleasant to hear.

With her intelligence, Henya has many quirky but interesting ideas. On a boring day, Henya invented a music band with only kettles! Henya has n kettles, with some kettles currently turned on and some turned off. Henya said that when all the kettles are turned on, they will boil at the same time and then a perfect symphony will be played.

As a fan of Henya, you really want to hear this symphony. Therefore, Henya challenges you to turn on all the kettles with only the following operations (zero or more times):

- Choose **at least** a and **at most** b consecutive kettles and change the state of these kettles (turn on to turn off or vice versa).

Check if you can turn on all the kettles with the operations that Henya has proposed.

Input

The first line contains a positive integer t ($1 \leq t \leq 100$) – the number of test cases. The description of each test case is as follows.

The first line contains three positive integers n, a, b ($1 \leq a \leq b \leq n \leq 100$) – the number of Henya's water kettles and the minimum and maximum number of kettles that you can change the state in each operation.

The second line contains a binary string s of length n .

- $s_i = 0$ means that the i -th kettle is initially turned off,
- otherwise $s_i = 1$ means that the i -th kettle is initially turned on.

Output

For each test case, print "YES" (without quotes) if you can turn on all the kettles and enjoy the symphony. Otherwise, print "NO" (without quotes).

Sample Explanation

In the first test case, you can turn on the first 3 kettles, then turn on the last 4 kettles.

In the second test case, you can only choose all 3 kettles and change their states. When you change the state for the first time, you will get the state of the kettles as 010. After the second time, you will get the state of the kettles as 101 – this is the initial state. Therefore, there is no way to turn on all the kettles.

In the third test case, you can perform the following operations, with the chosen kettles being underlined: $\underline{1}01 \rightarrow 0\underline{11} \rightarrow \underline{000} \rightarrow 111$

Sample Input 1

```
3
7 3 4
0000000
3 3 3
101
3 2 3
101
```

Sample Output 1

```
YES
NO
YES
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