

## Coding Arena



A B C D E F

### Problem : Occurrences in a Range

Given a range of numbers, find specific patterns in them and print the count of numbers that match the pattern. Patterns are of 3 type viz. Alternate, Consecutive and Wildcard. Each pattern is described as below

**Alternate:** - The verb denoting *Alternate* is A. As the name suggests, alternate pattern requires detection of numbers which have specified digit in alternate place.

**Consecutive:** - The verb denoting *Consecutive* is C. As the name suggests, consecutive pattern requires detection of numbers which has specified digit in required frequency appearing in consecutive manner.

**Wildcard:** - The verb denoting *Wildcard* is W. As the name suggests, wildcard pattern requires detection of numbers in which 'W' character can be replaced by any digit.

#### Input Format:

1. First line contains total number of test cases, denoted by N
2. Second line contains a range within which to detect the patterns. Range is provided in form of 2 numbers, viz. lower bound and upper bound, both inclusive, delimited by space.
3. Next N lines contain pattern queries where patterns are as described above. Input format of each pattern is described as below
  - a. A1 - denotes, find all numbers in the range which have digit 1 in alternate places
  - b. C21 - denotes, find all numbers in the range where digit 1 appears consecutively at least twice. Formally, this pattern follows grammar  $\langle C \rangle \langle \text{frequency} \rangle \langle \text{digit} \rangle$
  - c. 1W - denotes, find all numbers in the range where 1 precedes any other digit. Read constraints section carefully before implementing this pattern.

#### Output Format:

For each test case, print count of numbers in the range matching the corresponding pattern. Print each count on a separate line.

#### Constraints:

1. When solving Wildcard query, the pattern always starts with a digit
2. W character in wildcard query can be substituted by exactly one digit

#### Sample Input and Output

SNo.	Input	Output
1	5 2 200 A1 C22 9W 1W2 1WW	10 2 10 10 100

#### Note:

Please do not use package and namespace in your code. For object oriented languages your code should be written in one class.

#### Note:

Participants submitting solutions in C language should not use functions from `<conio.h>` / `<process.h>` as these files do not exist in gcc

#### Note:

Time Left

**01 43 34**  
hr min sec

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For C and C++, return type of main() function should be int.

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### Submit Answer

☐ I, **CHANDRAMANI ADIL** confirm that the answer submitted is my own.

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