



Problem C
Search by template

Input File: C.IN

Output File: standard output

Program Source File: C.C, C.CPP, C.JAVA

The pattern P and the text T are given. They contain the letters of the Latin alphabet (lowercase and uppercase). The pattern may also contain the characters '?', '[', ']', '{' and '}' You must find all the positions where P appears in T .

Each position in the pattern P may contain:

- a letter from the Latin alphabet ('a' - 'z', 'A' - 'Z')
- the character '?' that can replace any letter (on its place can be any letter)
- brackets '[' ... ']', between them there is the set of letters that may be in the current position
- brackets '{' ... '}', between them there is the set of letters that are not allowed to be in the current position
- the letters can be repeated in brackets like [asssa] or {kLLf}.

For example, if the pattern P is $A?[bcCc]\{De\}$, then the first letter of a match must be A , the second can be any Latin letter, the third - letter b , c or C , and the fourth can be any Latin letter except D or e .

Input. The first line contains the number of test cases n . Each test consists of two lines. The first line contains the pattern P with no more than 100 characters and 60 positions. The second line contains the text with no more than 10^6 letters.

Output. For each test case print on a separate line all text positions where the pattern matches, in ascending order (the first letter from the text T is assumed to have the position '1'). If the pattern P does not appear in text T , print the message "no match". There must be a single space between each printed position, and no extra space at the beginning/end of line.

Sample input	Sample output
3 A?[bcCc]{De} yAqCpsApbeAocqq ???[QWERTY] aSdFrQererRTY {eRT}? eRTeRTq	2 11 3 8 9 10 no match