UVa Online Judge

13126 Wildcards

Alice and Bob are playing a game: Alice selects a text t and a word w, and then Bob has to say how many times w occurs in t. However, after a while, Alice realizes that this version of the game is too boring for Bob and decides to make a modification: in her new version of the game, the wildcard symbol '`?`' can occur in w any number of times. Each occurrence of '`?`' in w can be matched with any character in t.

In the new version of the game, for instance, if the text is $t =$ `banana` and the word is $w =$ `?a?`, then w occurs twice in t: at position 0 matching "`ban`" and at position 2 matching "`nan`". Notice that matches can overlap.

Can you write a program to help Bob solve this new game?

Input

The input consists of several test cases, each one defined by two lines. The first line contains the text t and the second line contains the word w. The text t consists of lowercase letters from the English alphabet ($1 \leq |t| \leq 10^5$), and the word w consists of lowercase letters from the English alphabet and the wildcard character '`?`' ($1 \leq |w| \leq 10^5$). It is guaranteed that there will be at most k wildcard characters in w, where $0 \leq k \leq \min\left(|w|, 10^6/|t|\right)$.

Output

For each test case, print a line with one integer denoting the number of times w appears in t if each wildcard character matches any character in t.

Sample Input

```
banana
?a?
bananas
?a?
abide
a??d
abide
a?d
abracadabra
a?a
acisredis
?b
acisredis
??
icpc
world?finals
```

Sample Output

```
2
3
1
```

```
0
2
0
8
0
```