

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 $t = \text{banana}$ 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 $0 \leq k \leq \min(|w|, 10^6/|t|)$.

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
```