Problem 1—Splitting The Atom

As everybody knows, Oppenheimer discovered a technique for nuclear fission a reaction known colloquially as “splitting the atom.” What few people know is that is that young Oppie always enjoyed finding split atoms in sentences as kind of a word game. For example, in the sentence ALL THE TALK OF THE MARKET, there is a split ATOM, indicated by the underlined letters. In fact, there is another split atoms in there as well: ALL THE TALK OF THE MARKET. However, ALL THE TALK OF THE MARKET is *not* a split atom, since the letters of ATOM are out of order in this selection. The actual term for “split atom” is *subsequence*. A string is a subsequence of another string if the characters of the first string can be found in the same relative order within the second string. The letters do not have to be adjoining, but it's OK if they are. (The atom doesn't actually have to be “split”.) Help young Oppie out. Given a sentence, count how many times ATOM appears within it as a subsequence.

INPUT SPECIFICATION. Each input case contains a sentence consisting *entirely* of uppercase letters and spaces, followed by one **<EOLN>** character. An extra **<EOLN>** follows the last input case.

OUTPUT SPECIFICATION. The output cases should be processed in the same order as their respective input cases. Each output case should be the line “Case *c*: There are *a* way(s) to split an atom.” where *c* is the case number and *a* is the number of ATOM subsequences in the input string. Each output case should be followed by exactly two **<EOLN>**'s.

SAMPLE INPUT.

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ALL·THE·TALK·OF·THE·MARKET<EOLN>
ATOMATOM<EOLN>
<EOLN>
<EOF>
```

SAMPLE OUTPUT.

```
Case·1:·There·are·2·way(s)·to·split·an·atom.<EOLN>
<EOLN>
Case·2:·There·are·5·way(s)·to·split·an·atom.<EOLN>
<EOLN>
<EOF>
```