Task – Similar Words

We will consider two words – **W1** and **W2** – “similar” if they have the same length, start with the same letter, and a minimum percentage – P – of their letters match (a letter in **W1** matches a letter in **W2** if the two letters are the same symbol and are at the same position in both words).

For example, if **W1 = “kittens”** and **W2 = “kidding”**, the matching letters would be **k**, **i**, and **n**. That gives us **3** matching letters out of **7** letters, which is about **42.8%** of the letters. If **P = 40**, then we would say the words match. If **P = 43**, we would say the words don’t match.

A word is any uninterrupted sequence of lowercase English letters (**a-z**). So, punctuation or spaces surround a word from both “sides” (unless the word is at the start and/or end of the text).

Write a program, which reads a line of lowercase text **T** (letters and punctuation, but no numbers), a lowercase word **W** (letters only) and an integer number **P** and prints out how many words similar to **W** there are in the text.

Input

The text **T**, containing lowercase English letters (**a-z**) and punctuation (**.,;!?** and space) will be entered on the first line of input

The second line of input will contain a single word **W**, containing only lowercase English letters (**a-z**), followed by a single space and the integer **P**.

Output

A single line containing an integer number – the number of words similar to **W** in the text **T**, considering the percentage **P**

Restrictions

The text **T** will be no longer than **500** symbols and no shorter than **1** symbol.

The word **W** will be no longer than **30** symbols and no shorter than **1** symbol.

**P** will be between **1** and **100**, inclusive.

The total running time of your program should be no more than **0.1s**

The total memory allowed for use by your program is **5MB**

Example I/O

|  |  |
| --- | --- |
| Example Input | Expected Output |
| kittens,kidding.  kittenz 40 | 2 |
| abcd  dcba 1 | 0 |
| aaaa aabb abbb baaa  aaaa 50 | 2 |
| aaaa  aa 1 | 0 |