C++ Fundamentals: Judge Assignment 2 (JA2)

The following tasks should be submitted to the SoftUni Judge system, which will be open starting **Saturday, 9 December 2017, 10:00** (in the morning) and will close on **Saturday, 23 December 2017, 23:59**. Submit your solutions here: https://judge.softuni.bg/Contests/Compete/Index/878.

After the system closes, you will be able to "Practice" on the tasks – however the "Practice" results are NOT considered in the homework evaluation.

For this assignment, the code for each task should be a single C++ file, the contents of which you copy-paste into the Judge system.

Please be mindful of the strict input and output requirements for each task, as well as any additional requirements on running time, used memory, etc., as the tasks are evaluated automatically and not following the requirements strictly may result in your program's output being evaluated as incorrect, even if the program's logic is mostly correct.

You can use C++03 and C++11 features in your code.

Unless explicitly stated, any integer input fits into **int** and any floating-point input can be stored in **double**.

NOTE: the tasks here are NOT ordered by difficulty level.

Task 2 – Word Matching (JA2-Task-2-Word-Matching)

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 **16MB**

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