**Common Substrings**

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| --- | --- | --- |
| **Time Limit:** 5000MS |  | **Memory Limit:** 65536K |
|  |  |  |

**Description**

A substring of a string *T* is defined as:

*T*(*i*, *k*)=*TiTi*+1...*Ti+k*-1, 1≤*i*≤*i+k*-1≤|*T*|.

Given two strings *A*, *B* and one integer *K*, we define *S*, a set of triples (*i*, *j*, *k*):

*S* = {(*i*, *j*, *k*) | *k*≥*K*, *A*(*i*, *k*)=*B*(*j*, *k*)}.

You are to give the value of |*S*| for specific *A*, *B* and *K*.

**Input**

The input file contains several blocks of data. For each block, the first line contains one integer *K*, followed by two lines containing strings *A* and *B*, respectively. The input file is ended by *K*=0.

1 ≤ |*A*|, |*B*| ≤ 105  
1 ≤ *K* ≤ *min*{|*A*|, |*B*|}  
Characters of *A* and *B* are all Latin letters.

**Output**

For each case, output an integer |*S*|.

**Sample Input**

2

aababaa

abaabaa

1

xx

xx

0

**Sample Output**

22

5

**Source**

[POJ Monthly--2007.10.06](http://poj.org/searchproblem?field=source&key=POJ+Monthly--2007.10.06), wintokk