E. Puzzle Lover

time limit per test: 2 seconds
memory limit per test: 256 megabytes
input: standard input
output: standard output

Oleg Petrov loves crossword puzzles and every Thursday he buys his favorite magazine with crosswords and other word puzzles. In the last magazine Oleg found a curious puzzle, and the magazine promised a valuable prize for it's solution. We give a formal description of the problem below.

The puzzle field consists of two rows, each row contains n cells. Each cell contains exactly one small English letter. You also are given a word w, which consists of k small English letters. A *solution* of the puzzle is a sequence of field cells c_1, ..., c_k, such that:

- For all i from 1 to k the letter written in the cell c_i matches the letter w_i;
- All the cells in the sequence are pairwise distinct;
- For all i from 1 to k - 1 cells c_i and c_{i+1} have a common side.

Oleg Petrov quickly found a solution for the puzzle. Now he wonders, how many distinct solutions are there for this puzzle. Oleg Petrov doesn't like too large numbers, so calculate the answer modulo $10^9 + 7$.

Two solutions c_i and c'_i are considered distinct if the sequences of cells do not match in at least one position, that is there is such j in range from 1 to k, such that $c_j \neq c'_j$.

Input

The first two lines contain the state of the field for the puzzle. Each of these non-empty lines contains exactly n small English letters.

The next line is left empty.

The next line is non-empty and contains word w, consisting of small English letters.

The length of each line doesn't exceed $2\,000$.

Output

Print a single integer — the number of distinct solutions for the puzzle modulo $10^9 + 7$.

Examples

input
```
code
edoc

code
```

output
```
4
```

input
```
aaa
aaa

aa
```

output
```
14
```