

Task 2

Common Substring

Task

Write a program which, given two strings, computes the maximum length of a string included in both of the given strings.

A string s is said to be *included* in a string t if s appears consecutively in t . The empty string, or the string of length 0, is included in any string. For example, some of the strings which are included in a string ABRACADABRA are ABRA, RAC, D, ACADABRA, ABRACADABRA and the empty string, whereas some of the strings which are not included in the string ABRACADABRA are ABRC, RAA, BA and K.

Examples

Example 1 When two strings ABRACADABRA and ECADADABRBCRDARA are given, some of the strings which are included in both strings are CA, CADA, ADABR and the empty string. The longest is ADABR, whose length is 5. Figure 2-1 shows the positions of ADABR included in the two given strings.

ABRACADABRA
ECADADABRBCRDARA

Figure 2-1 The positions of ADABR included in the strings in Example 1.

Example 2 When two strings UPWJCIRUCAXIIRGL and SBQNYBSBZDFNEV are given, the only string that is included in both strings is the empty string, whose length is 0.

Input

The input file is named `input.txt`.

The input file consists of two lines. Each line contains one string. The strings consist of capital letters in the alphabet, and the length of each string is between 1 and 4000, inclusive.

30% of the mark is given for test cases where the length of each string is between 1 and 50, inclusive.

Output

The output file is named `output.txt`.

The output file consists of one line, and the line should contain the maximum length of a string that is included in both of the given strings.

Sample inputs and outputs

The following inputs and outputs correspond to the examples above.

Sample input and output 1

input.txt

```
ABRACADABRA  
ECADADABRBCRDARA
```

output.txt

```
5
```

Sample input and output 2

input.txt

```
UPWJCIRUCAXIIRGL  
SBQNYBSBZDFNEV
```

output.txt

```
0
```