

# String Finding (Hard)

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You have a string (indexed from 0) with no more than  $10^6$  lowercase characters. Find the first occurrence of a string  $T$  ( $1 \leq |T| \leq |S| \leq 10^6$ ), or print `-1` if it is not a substring of  $S$ .

## Input Specification

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The first line will have the string  $S$ .

The second line will have the string  $T$ .

## Output Specification

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Print the index of the first occurrence of the string  $T$  in  $S$ , or `-1` if it is not a substring of  $S$ .

## Sample Input

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```
higuyshowsitgoinghiguys  
higuys
```

## Sample Output

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```
0
```