

Contest Duration: 2025-11-01(Sat) 23:00 (<http://www.timeanddate.com/worldclock/fixedtime.html?iso=20251101T2100&p1=248>) - 2025-11-02(Sun) 00:40 (<http://www.timeanddate.com/worldclock/fixedtime.html?iso=20251101T2240&p1=248>) (local time) (100 minutes)

[Back to Home \(/home\)](/home)

[🏠 Top \(/contests/abc430\)](/contests/abc430)

[📋 Tasks \(/contests/abc430/tasks\)](/contests/abc430/tasks)

[❓ Clarifications \(/contests/abc430/clarifications\)](/contests/abc430/clarifications)

[📊 Results ▼](#)

[🏆 Standings \(/contests/abc430/standings\)](/contests/abc430/standings)

[🏆 Virtual Standings \(/contests/abc430/standings/virtual\)](/contests/abc430/standings/virtual)

[📖 Editorial \(/contests/abc430/editorial\)](/contests/abc430/editorial)

[💬 Discuss \(https://codeforces.com/blog/entry/147960\)](https://codeforces.com/blog/entry/147960)



## E - Shift String

[Editorial \(/contests/abc430/tasks/abc430\\_e/editorial\)](/contests/abc430/tasks/abc430_e/editorial)



Time Limit: 2 sec / Memory Limit: 1024 MiB

Score : 450 points

### Problem Statement

You are given strings  $A$  and  $B$  of equal length consisting of 0 and 1.

You can perform the following operation on  $A$  zero or more times.

- Move the first character of  $A$  to the end.

Find the minimum number of operations required to make  $A = B$ .

If it is impossible to make  $A = B$  no matter how you operate, print  $-1$  instead.

You are given  $T$  test cases; find the answer for each of them.

### Constraints

- $1 \leq T \leq 10000$
- $A$  and  $B$  are strings consisting of 0 and 1.
- $2 \leq |A| = |B| \leq 10^6$
- For a single input, the sum of  $|A|$  does not exceed  $10^6$ .

### Input

The input is given from Standard Input in the following format:

2026-01-02 (Fri)  
05:32:36 +11:00

$T$   
case<sub>1</sub>  
case<sub>2</sub>  
⋮  
case <sub>$T$</sub>

Each test case is given in the following format:

$A$   
 $B$

## Output

Print  $T$  lines.

The  $i$ -th line should contain the answer for the  $i$ -th test case.

### Sample Input 1

Copy

```
5
1010001
1000110
000
111
01010
01010
0101
0011
100001101110000001010110110001
101100011000011011100000010101
```

Copy

### Sample Output 1

Copy

```
2
-1
0
-1
22
```

Copy

This input contains five test cases.

- For the first test case,  $A = 1010001$  and  $B = 1000110$ .
  - By performing the operation on  $A$  twice,  $A$  becomes  $1010001 \rightarrow 0100011 \rightarrow 1000110$ , which makes  $A = B$ .

2026-01-02 (Fri)  
05:32:36 +11:00

- For the second test case, no matter how you perform the operation, you cannot change 000 to 111.
- For the third test case,  $A = B$  from the beginning.

---

[/#telegram](#))

[url=https%3A%2F%2Fatcoder.jp%2Fcontests%2Fabc430%2Ftasks%2Fabc430\\_e%3Flang%3Den&title=E%20-](https://atcoder.jp/contests/abc430/tasks/abc430_e%3Flang%3Den&title=E%20-)

---

[Rule \(/contests/abc430/rules\)](/contests/abc430/rules) [Glossary \(/contests/abc430/glossary\)](/contests/abc430/glossary)

[Terms of service \(/tos\)](/tos) [Privacy Policy \(/privacy\)](/privacy) [Information Protection Policy \(/personal\)](/personal) [Company \(/company\)](/company)  
[FAQ \(/faq\)](/faq) [Contact \(/contact\)](/contact)

Copyright Since 2012 ©AtCoder Inc. (<http://atcoder.co.jp>) All rights reserved.