

Contest Duration: 2025-05-24(Sat) 22:00 (<http://www.timeanddate.com/worldclock/fixedtime.html?iso=20250524T2100&p1=248>) - 2025-05-24(Sat) 23:40 (<http://www.timeanddate.com/worldclock/fixedtime.html?iso=20250524T2240&p1=248>) (local time) (100 minutes)

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

[🏠 Top \(/contests/abc407\)](/contests/abc407)

[📋 Tasks \(/contests/abc407/tasks\)](/contests/abc407/tasks)

[❓ Clarifications \(/contests/abc407/clarifications\)](/contests/abc407/clarifications)

[📊 Results ▼](#)

[🏆 Standings \(/contests/abc407/standings\)](/contests/abc407/standings)

[🏆 Virtual Standings \(/contests/abc407/standings/virtual\)](/contests/abc407/standings/virtual)

[📖 Editorial \(/contests/abc407/editorial\)](/contests/abc407/editorial)

[💬 Discuss \(https://codeforces.com/blog/entry/143155\)](https://codeforces.com/blog/entry/143155)



C - Security 2

[Editorial \(/contests/abc407/tasks/abc407_c/editorial\)](/contests/abc407/tasks/abc407_c/editorial)



Time Limit: 2 sec / Memory Limit: 1024 MiB

Score : 300 points

Problem Statement

At the entrance of AtCoder Inc., there is a special pass-code input device. The device consists of a screen displaying one string, and two buttons.

Let t be the string shown on the screen. Initially, t is the empty string. Pressing a button changes t as follows:

- Pressing **button A** appends \emptyset to the end of t .
- Pressing **button B** replaces every digit in t with the next digit: for digits \emptyset through 8 the next digit is the one whose value is larger by 1 ; the next digit after 9 is \emptyset .

For example, if t is 1984 and button A is pressed, t becomes $1984\emptyset$; if button B is then pressed, t becomes $2\emptyset951$.

You are given a string S . Starting from the empty string, press the buttons zero or more times until t coincides with S . Find the minimum number of button presses required.

Constraints

- S is a string consisting of $\emptyset, 1, 2, 3, 4, 5, 6, 7, 8$, and 9 .
- $1 \leq |S| \leq 5 \times 10^5$, where $|S|$ is the length of S .

2026-01-02 (Fri)

05:24:20 +11:00

Input

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

S

Output

Output the answer.

Sample Input 1

Copy

21

Copy

Sample Output 1

Copy

4

Copy

The following sequence of presses makes t equal to 21.

- 1. Press button A. t becomes 0.
- 2. Press button B. t becomes 1.
- 3. Press button A. t becomes 10.
- 4. Press button B. t becomes 21.

It is impossible to obtain 21 with fewer than four presses, so output 4.

Sample Input 2

Copy

407

Copy

Sample Output 2

Copy

17

Copy

Sample Input 3

Copy

2025524202552420255242025524

2026-01-02 (Fri)
05:24:20 +11:00

Sample Output 3

[Copy](#)

150

[Copy](#)

'#telegram)

url=https%3A%2F%2Fatcoder.jp%2Fcontests%2Fabc407%2Ftasks%2Fabc407_c%3Flang%3Den&title=C%20-

[Rule \(/contests/abc407/rules\)](/contests/abc407/rules) [Glossary \(/contests/abc407/glossary\)](/contests/abc407/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.