**Phantom Password**

Max Score: 8

Hiroto has noticed his phone being opened without him knowing. He wants to know if his password is strong. To make his password strong, it needs meet the following criteria:

* It has at least 6 characters and at most 20 characters.
* It contains at least one lowercase letter, at least one uppercase letter, and at least one digit.
* It does not contain three repeating characters in a row (i.e. "Baaabb0" is weak, but "Baaba0" is strong).
* Given a string password, return the minimum number of steps required to make the password strong, if the password is already strong, return 0.

In one step, you can:

Insert one character to password, Delete one character from password, or Replace one character of password with another character.

**Input Format**

Input *password* as a *string*

**Constraints**

*1* <= *password*.*length* <= 50 password consists of letters, digits, dot '.' or exclamation mark '!'

**Output Format**

An *integer* for the smallest number of steps to a strong password following the possible changes that could be made

**Sample Input 0**

a

**Sample Output 0**

5

**Sample Input 1**

aA1

**Sample Output 1**

3