Password Hacking (80 / 100)

Alice is setting up a password system. The passwords are alphanumeric. Moreover, to ensure the passwords are strong, it requires:

1. At least 3 lowercase letters (there are 26 lowercase characters)
2. At least 3 uppercase letters (there are 26 uppercase characters)
3. At least 3 numerical digits (there are 10 numerical digits)

The mischievous Bob watched as Alice was typing in a password which fulfilled the requirements and secretly jotted the password down. However, due to his terrible handwriting, Bob could not make out what some part of the password was. Help Bob find out how many possible passwords could Alice have typed in. Since the number can be very large, Bob is only interested in the number modulo 1000000007 (ie. the remainder of the number when divided by 1000000007, you may read about it here https://en.wikipedia.org/wiki/Modulo_operation). If no possible answer exists, then output 0.

Input Format

A string, `str` , made up of letters from the English alphabet (both upper case and lower case), digits or question marks. The question marks represent the characters which are illegible.

Output Format

Output the number of passwords Alice could've typed in.

Sample Input

```
str = "abcABC12?"
```

Sample Output

```
10
```

Explanation

We could replace the '?' with any of the 10 digits to fulfil the requirements. Replacing it with alphabets would not fulfil the requirements.

Submit All Answers

Test Cases

Case 1 (10/10 points) | Case 2 (10/10 points) | Case 3 (15/15 points)

Case 4 (15/15 points) | Case 5 (15/15 points) | Case 6 (15/15 points)

Case 7 (0/20 points)

Test Case 1

```
str = "iPhw5Va3n"
```

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Answer

0

Submit **Solved!**