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A. QAQ

time limit per test: 1 second

memory limit per test: 256 megabytes

"QAQ" is a word to denote an expression of crying. Imagine "Q" as eyes with tears and "A" as a mouth.

Now Diamond has given Bort a string consisting of only uppercase English letters of length n . There is a great number of "QAQ" in the string (Diamond is so cute!).



illustration by 猫屋 <https://twitter.com/nekovaliu>

Bort wants to know how many subsequences "QAQ" are in the string Diamond has given. Note that the letters "QAQ" don't have to be consecutive, but the order of letters should be exact.

Input

The only line contains a string of length n ($1 \leq n \leq 100$). It's guaranteed that the string only contains uppercase English letters.

Output

Print a single integer — the number of subsequences "QAQ" in the string.

Examples

input

QAQAQYSYIOIWIN

[copy](#)

output

4

[copy](#)

input

QAQQQZZZYNOIWIN

[copy](#)

output

3

[copy](#)

Note

In the first example there are 4 subsequences "QAQ": "QAQAQYSYIOIWIN", "QAQAQYSYIOIWIN", "QAQAQYSYIOIWIN", "QAQAQYSYIOIWIN".

Codeforces Round 447 (Div. 2)

Finished

Practice



→ Virtual participation

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→ Submit?

Language: [GNU G++17 7.3.0](#)

Choose file: [Choose File](#) No file chosen

[Submit](#)

→ Problem tags

brute force [dp](#) *800

No tag edit access

→ Contest materials

- Announcement (en) [X](#)

- Tutorial (en) [X](#)



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