F. Dasha and Nightmares

time limit per test: 4 seconds
memory limit per test: 512 megabytes

Dasha, an excellent student, is studying at the best mathematical lyceum in the country. Recently, a mysterious stranger brought n words consisting of small latin letters $s_1, s_2, \ldots, s_n$ to the lyceum. Since that day, Dasha has been tormented by *nightmares*.

Consider some pair of integers $\langle i, j \rangle$ $(1 \leq i \leq j \leq n)$. *A nightmare* is a string for which it is true:

- It is obtained by concatenation $s_i s_j$;
- Its length is **odd**;
- The number of different letters in it is **exactly** 25;
- The number of occurrences of each letter that is in the word is **odd**.

For example, if $s_i =$ "abcdefg" and $s_j =$ "ijklmnopqrstuvwxyz", the pair $\langle i, j \rangle$ creates a *nightmare*.

Dasha will stop having *nightmares* if she counts their number. There are too many *nightmares*, so Dasha needs your help. Count the number of different *nightmares*.

Nightmares are called different if the corresponding pairs $\langle i, j \rangle$ are different. The pairs $\langle i_1, j_1 \rangle$ and $\langle i_2, j_2 \rangle$ are called different if $i_1 \neq i_2$ **or** $j_1 \neq j_2$.

Input

The first line contains a single integer n $(1 \leq n \leq 2 \cdot 10^5)$ — the number of words.

The following n lines contain the words $s_1, s_2, \ldots, s_n$, consisting of small latin letters.

It is guaranteed that the total length of words does not exceed $5 \cdot 10^6$.

Output

Print a single integer — the number of different *nightmares*.

Example

input
10 ftl abcdefghijklmnopqrstuvwxy abcdeffghijkllmnopqrsttuvwxy ffftl aabbccddeeffgghhiijjkkllmmnnooppqqrrssttuuvvwwxxyy thedevid bcdefghhiiiijklmnopqrsuwxyz gorillasilverback abcdefg ijklmnopqrstuvwxyz
output
5

Note

In the first test, *nightmares* are created by pairs $\langle 1, 3 \rangle$, $\langle 2, 5 \rangle$, $\langle 3, 4 \rangle$, $\langle 6, 7 \rangle$, $\langle 9, 10 \rangle$.