Katatonic Set

Recent papers of British Scientists revealed that for the human brain, misreading a word happens most frequently when there exists a different word that consists of the same letters but written in some different order. A prominous online newspaper, the InterContinental Plebs' Courier (ICPC) has therefore decided to restrict their journalists from using words that are way too similar to each other in this sense. They tasked you to determine from a set of anagrams, what is the largest subset of words that is safe to use, at least to some extent.

You are given W, a set of n words that are anagrams of each other. There are no duplicate letters in any word. A set of words $S \subseteq W$ is called *katatonic* if there is no way to turn a word $x \in S$ into another word $y \in S$ by swapping only a single pair of (not necessarily adjacent) letters in x.

Find the size of the largest katatonic set S chosen from the given set of words W.

Input

The first line of input contains an integer n ($1 \leq n \leq 500$). Following that are n lines each with a single word.

Every word contains only lowercase English letters and no duplicate letters. All n words are unique, have at least one letter, and every word is an anagram of every other word.

Output

Output the size of the largest katatonic set.

Examples

input	output
6 abc acb cab cba bac bca	3

input	output
11 alerts alters artels estral laster ratels salter slater staler stelar talers	8
6 ates east eats etas sate teas	4