

KMIT-NFS-1004	KMIT – NIRANTHAR Season-1 Programming Assignments	Tuesday 29th OCT 2019
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1. PicardsPhrase

Captain Picard of the StarTrek Enterprise, is venturing into new Galaxies, with his team.

He receives a strange message from one of his first officers, Riker, who is on board another StarShip of the Klingons on an inter-galactic summit. Klingons, known for their interest in English words, have set a simple task for Riker to solve, before they beam him back to Enterprise.

Given a set of words, Riker is to find the number of steps needed to make each of these a palindrome. They have also set two rules for the same -

a. He can only change the alphabet to the one that comes (order being - A to Z) before it.

So, if the word has the letter 'n', then it can be replaced with the letter 'm' but not 'o'.

b. The alphabet 'a' cannot be changed.

Each modification of any letter can be counted as a single step.

Riker sent the words to Captain. Help Cptn. Picard in solving the problem (number of steps needed to make each of the words a palindrome)

Here is a sample, given the word, ijk the following two steps are performed: ijk -> ijj -> iji

Input Format

The first line contains a digit p, the number of words.

The next p lines - will each contain a word.

Constraints

$1 \leq p \leq 10$

$1 \leq |a| \leq 10^4$

All words have lower case English letters, ascii [a-z], with no spaces.

Output Format

One line per word containing the minimum number of steps needed.

Input/Output

Input	Output	Comments
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4 pqr pqrqp pqrs rqp	2 0 4 2	Explanation: For 1st input word: pqr -> pq q -> pq p . Hence o/p : 2 For 2nd input word: pqrqp is already a palindrome. Hence o/p : 0 For 3rd input word: pqrs -> pqr r -> pqr q -> pqr p -> pq qp . Hence o/p : 4 For 4th input word: rqp -> q qp -> p qp. Hence o/p : 2
2 good mrng	3 10	Explanation: For 1st input word: good-> f ood-> e ood-> d ood. Hence o/p : 3 For 2nd input word: mrng-> k rng-> j rng-> i rng-> h rng-> g rng-> q ng-> p ng-> o ng-> n ng. Hence o/p : 10

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2. Minimum Multiple

Given a collection C1 of 'n' positive integers and a number 'm' write a C program to find the minimum multiple of m in C1. If no such multiple exist in C1 then print 'No multiple found'

For example, if there are seven elements 23, 24, 25, 12, 6, 7, 11 and m is 3 then the output should be 6.

Input Format

First line contains the number of elements in the collection C1, n

Next 'n' lines contain the elements in the collection C1

Next line contains the value of m

Output Format

Print the minimum multiple of 'm' present in C1 or 'No multiple found'.

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Input/Output

Input	Output	
5 22 1 6 4 39 5	No multiple found	Explanation: Input Format: First line contains the number of elements in the collection C1, n Next 'n' lines contain the elements in the collection C1 Next line contains the value of m Output Format: Print the minimum multiple of 'm' present in C1 or 'No multiple found'
5 36 100 5 18 1 6	18	Explanation: Input Format: First line contains the number of elements in the collection C1, n Next 'n' lines contain the elements in the collection C1 Next line contains the value of m Output Format: Print the minimum multiple of 'm' present in C1 or 'No multiple found'