ACSL

American Computer Science League

**All-Star #7**

**008 2015 - 2016**

**ACSL PERMUTATIONS**

**PROBLEM**: Find the location of a string within the alphabetized list of all of its unique permutations.

Example: LEAD. There are 24 unique permutations; ADEL is the first and LEDA is the last. The string LEAD is the 23rd (the second to last).

Example: MOTOR. There are 60 unique permutations, starting with MOORT and ending with TROOM. The string MOTOR is the 5th.

**INPUT**: There will be 10 lines of input. Each line will contain one string, up to 25 characters long, with no embedded blanks.

**OUTPUT**: For each input line, print the location of string in the alphabetical list of unique permutations of that string.

|  |  |
| --- | --- |
| **SAMPLE INPUT:**   1. abc 2. acsl 3. motor 4. mom 5. nashua 6. moot 7. radius 8. radii 9. tattle 10. rarara | **SAMPLE OUTPUT:**   1. 1 2. 2 3. 5 4. 2 5. 196 6. 1 7. 362 8. 49 9. 72 10. 15 |

**RULES REMINDER**: Any program run after 12:30 PM will have an execution time limit of 10 minutes from when the program was started. Any program that was started before 12:30pm will have until 12:40pm to complete. Results output after the time limit will receive no credit.

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**TEST DATA**

**TEST INPUT TEST OUTPUT**  
1. hotel 1. 41  
2. number 2. 469  
3. numbers 3. 2809  
4. z 4. 1  
5. anagram 5. 251   
6. bananagram 6. 32591  
7. abracadabra 7. 21520  
8. permutations 8. 122531859  
9. allstarcontest 9. 72102379  
10. computerscience 10. 4417444364