



2019-2020

AMERICAN COMPUTER SCIENCE LEAGUE

Contest #2

Intermediate Division - ACSL Sameness Factor

PROBLEM: Given 2 strings, separated by a space, calculate the ACSL Sameness Factor (ASF). Repeat the following 3 steps in order until no other deleting aligns like characters:

- Align the strings from left to right.
- Delete the like characters in the like locations from left to right.
- If the like location characters are not the same and deleting a character at a location in one of the strings which shifts the remaining characters to the left causes like characters to be at like locations, delete those characters. If there is a case as in NAPE and ANTI where it is possible to delete a character at the same location in both strings, then delete it in the second string. Therefore, the A would be deleted and the NTI shifted to the left.

Calculate the ACSL Sameness Factor by doing the following:

- Calculate the difference in the alphabetic locations from the aligned string characters in the second string to the string character in the first string. B to D would add 2 to the ASF. D to B would add -2 to the ASF.
- If there are characters remaining in one of the strings, add the number of those characters to the ASF.

Example: ABCDEFT ABXCGBTZFP

ABCDEFT → ~~A~~BCDEFT → CDEF → ~~C~~DEF → DEF → ~~D~~EF → DE
 ABXCGBTZFP → ~~A~~BXCGBTZFP → ~~X~~CGBZFP → ~~C~~GBZFP → GBZFP → GBFP → GBP

The ASF is calculated as: G to D = -3 B to E = +3 + P = +1 (-3 + 3 + 1 = 1)

INPUT: There will be 5 inputs. Each input will contain 2 strings separated by a space and each fewer than 200 characters.

OUTPUT: For each input, print the ASF as described above.

SAMPLE INPUT**SAMPLE OUTPUT:**

(<http://www.datafiles.acsl.org/2020/contest2/int-sample-input.txt>)

BLAMEABLENESSES BLAMELESSNESSES	1. -35
MEZZAMINES RAZZMATAZZ	2. -5
ABBREVIATIONS ABBREVIATORS	3. -4
ABCDEFGHIJKLMNO ABKCLDZZHQJWWLX	4. -86
ABCDEFGHIJKL ABXEWFRRH	5. -52



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TEST DATA

TEST INPUT:

MYARTLOLLIPOPS MYLARBALLOONS
MASSACHUSETTSBAYCOLONY MINUTEMANNATIONALHISTORICALPARK
LOWERMACTOWNSHIPPA CRANBERRYTOWNSHIPPA
AMERICANCOMPUTERSCIENCELEAGUE NATIONALACADEMICGAMESLEAGUE
ABCDEFGHIJK ABDCEFGKILKJMN

TEST OUTPUT:

1. 23
2. 27
3. 11
4. 68
5. -9