



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.
- Proceeding 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 that location, delete those characters and any other like characters at like locations. 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 → ~~DE~~F → DE
 ABXCGBTZFP → ~~A~~BXCGBTZFP → ~~X~~CGBZFP → ~~C~~GBZFP → GBZFP → ~~GB~~ZFP → GBZ → GB

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
ABCDEFGHJKLMNOP ABKCLDZZHQJWWLX	4. -86
ABCDEFGHJKLM ABXEWFRRH	5. -52

Intermediate Division - ACSL Sameness Factor

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