

# American Computer Science League

2017-2018

Contest #2

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## INTERMEDIATE DIVISION ACSL Enclosure

**PROBLEM:** Given string data input representing a mathematical expression, determine the possible location(s) of the missing symbol of enclosure. Although we show spaces between characters for readability, the input strings will have no spaces. All operands will be one-digit or two-digit integers. The order of evaluation for the symbols is parentheses and then brackets.

Given  $[ 2 + 3 * 8 - 3 ) ] + 6$ . There is a missing parenthesis. A left parenthesis is missing. It could be correctly placed in several locations:

$[ ( 2 + 3 * 8 - 3 ) ] + 6$     **Location 2**

$[ 2 + ( 3 * 8 - 3 ) ] + 6$     **Location 4**

$[ 2 + 3 * ( 8 - 3 ) ] + 6$     **Location 6**

**INPUT:** There will be five lines of input. Each line will contain a string of characters with no spaces representing a mathematical expression. Each symbol of enclosure will be used at most once. Each expression will have just 1 missing symbol of enclosure. The operators used will be: +, -, \*, and /.

**OUTPUT:** For each line of input, list all the locations in that expression where the missing symbol of enclosure could be correctly placed. Note: single operands are never enclosed.

### SAMPLE INPUT

1.  $[ 2 + 3 * 8 - 3 ) ] + 6$
2.  $[ ( 2 - 5 ) + 6$
3.  $[ ( 5 + 5 - 2 ] * 5$
4.  $13 - [ ( 6 + 18 ) / 3 * 22$
5.  $[ 4 / ( 12 - 8 / 4 * 25 ]$

### SAMPLE OUTPUT

1. 2, 4, 6
2. 7, 9
3. 6, 8
4. 11, 13, 16
5. 9, 11, 14