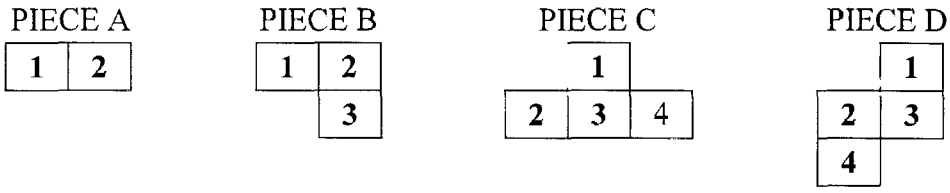
ACSL

2008 - 2009 **American Computer Science League** **Contest #3**

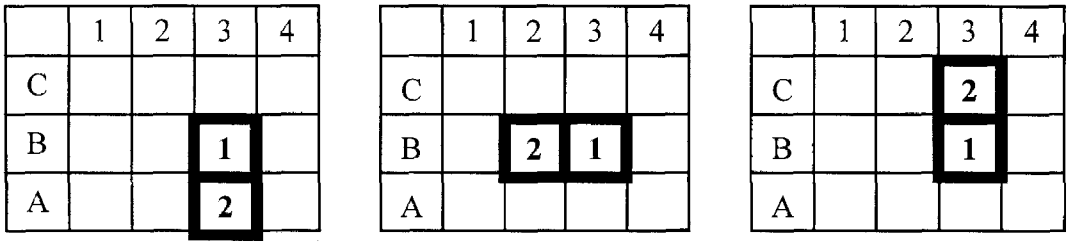
Senior Division
ACSL Blokus

PROBLEM: *Blokus* is an abstract strategy board game for two to four players, invented by Bernard Tavitian and first released in 2000 by Sekkoïa, a French company. The ACSL version of the game is played on a square board divided into 10 rows and 10 columns. Rows are labeled A - J and columns 1 - 10. Pieces made of square tiles are used. The following 4 pieces will be used:



The object of the game is to place the pieces corner-to-corner on the board. Edges cannot touch. Tiles cannot overlap. All pieces must fit on the board. A clock-wise rotation amount for all pieces of 0, 90, 180, or 270 degrees is allowed. In the rotation tile 1 is always the pivot tile. The 3 diagrams below show the rotations of piece A with tile #1 placed at location B#3.

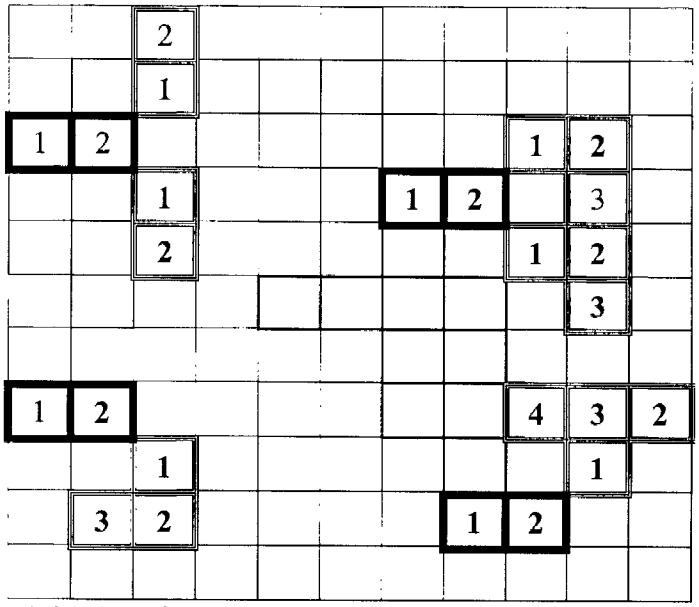
90 degrees 180 degrees 270 degrees



INPUT: There will be 5 lines of input. Each line will contain:

1. A 2-character starting location in row-column order for piece A. Example: C2 tells you to put tile #1 of piece A at location C2.
2. A rotation amount for piece A. In the rotation tile #1 is always the fixed pivot tile. Tile 1 does not change its location in any rotation.
3. A tile number for piece A. Example: Since piece A is made with just 2 tiles, this tile number will be a 1 or a 2.
4. A second tile number to be used with all 4 tiles. This is the tile number that will be used to link with piece A.

Sample Input #1 tells you to go to location row F-column 4 and place tile #1 of piece A rotated 0 degrees at that location. Using just tile #2 of piece A, try to place all of the pieces corner-to-corner with it using tile #1 of the other pieces as the link point. Shown are some examples of the pieces connecting with various rotations.



OUTPUT: For each input, print the total number of ways the rotated tile pieces fit corner-to-corner at the given tile number of piece A. If no piece will fit, then print NONE.

SAMPLE INPUT	**SAMPLE OUTPUT**
1. F4, 0, 2, 1	1. 16
2. J1, 90, 2, 2	2. 6
3. A4, 180, 1, 4	3. 4
4. C2, 270, 2, 3	4. 3