Senior Division
Mancala

PLAYER A

PLAYER B
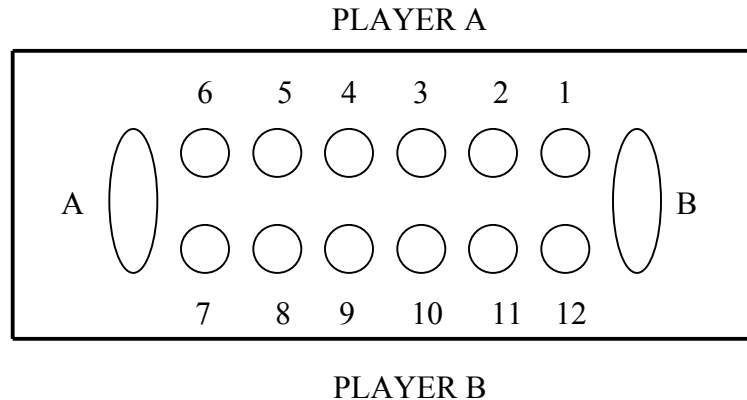
PROBLEM: The game of Mancala is played by two players sitting on opposite sides of a board similar to the one above. Each of the numbered circles represents a bowl. At the start of the game each bowl will contain 4 stones. The ovals represent the deposit bowls (mancalas). Player A can take all the stones from any one of his numbered bowls and deposit the stones one at a time in the bowls to his right (1, 2, 3….12). Player A may place a stone in his mancala as he goes from bowls 6 to 7. Player A does not place a stone in player B's mancala as he goes from bowls 12 to 1. When Player A has finished placing his stones, Player B follows the same rules during his turn. Player B may place a stone in his mancala as he goes from bowl 12 to 1. Player B does not place a stone in player A's mancala as he goes from bowls 6 to 7.

A player may have his turn extended if he drops the last stone in his hand into any bowl that was not empty and now does not contain exactly 4 stones. The player picks up all the stones in that bowl and continues his turn. If the last stone in a turn is placed in a player's own mancala, then the turn ends.

A player wins when, after completing his turn, all the numbered bowls on his side are empty.

INPUT: There will be 5 lines of input. Each line will contain just values. The first value will be a positive integer starting bowl number of each player in A-B-A-B-A order as the game is played. The second value will be a positive integer or the characters A or B. The second value will be the bowl number whose count must be printed. Using the Sample Input below, Player A moves the stones from bowl #2 and the count in bowl #5 is printed. Then Player B moves the stones from bowl #7 and the count from bowl #9 is printed. The game continues for a total of 5 turns. The game starts with its original configuration of 4 stones in each bowl.

OUTPUT: For each line of input, print the number of stones in the bowl given by the second value after the turn is completed.

SAMPLE INPUT	SAMPLE OUTPUT
1. 2, 5	1. 8
2. 7, 9	2. 1
3. 1, 11	3. 10
4. 11, 4	4. 6
5. 4, A	5. 6