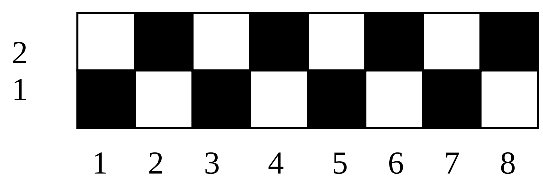
2001 - 2002 **AMERICAN COMPUTER SCIENCE LEAGUE** **CONTEST #2**

Senior Division Programming Problem

CHECKERS

PROBLEM: The game of Checkers is played on an 8 x 8 grid. The checkers are placed on the black squares only. Checkers move towards the other end of the grid by moving to an unoccupied, adjacent black square. That is a checker at location (1,1) would move to location (2,2) if it were unoccupied. Checkers may “jump” over and capture an opponent’s checker if that checker is in an adjacent black square and the landing black square is unoccupied. That is a checker at location (1,1) could ‘jump” over an opponent’s checker at location (2,2) if location (3,3) was unoccupied. For this game your “home row” is row 1 and your opponent’s home row is row 8. If your checker lands in your opponent’s home row, the checker becomes a “king” and can then jump both forwards and backwards.



INPUT: In this problem, you will be given the number and location of your checkers, followed by the number of your opponent’s checkers and their locations. Locations will be given in ordered pair format (row, column). Sample Input line #1 below indicates that you have 1 checker at location (1,5) and your opponent has 2 checkers at locations (2,6), (4,6).

OUTPUT: Given a board setup, it is your move. Make the move that gives the most jumps. Print the greatest number of jumps possible for one move.

SAMPLE INPUT	**SAMPLE OUTPUT**
1. 1,1,5,2,2,6,4,6	1. 2
2. 1,6,2,3,7,3,7,5,5,7	2. 3
3. 1,1,5,3,2,4,2,6,4,6	3. 2
4. 2,1,3,1,5,6,2,4,2,6,4,2,4,6,6,6,4,4	4. 3

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SENIOR DIVISION PROGRAMMING PROBLEM

TEST DATA

TEST INPUTS	TEST OUTPUTS
1. 1,1,7,2,2,6,4,4	1. 2
2. 1,2,2,5,3,3,5,3,7,3,7,5,5,7	2. 5
3. 2,1,1,1,5,4,2,6,3,7,2,4,3,3	3. 0
4. 2,2,2,4,8,5,3,3,5,3,7,3,7,5,5,7	4. 4
5. 2,8,2,1,7,5,3,3,5,3,7,3,2,6,4,6	5. 3