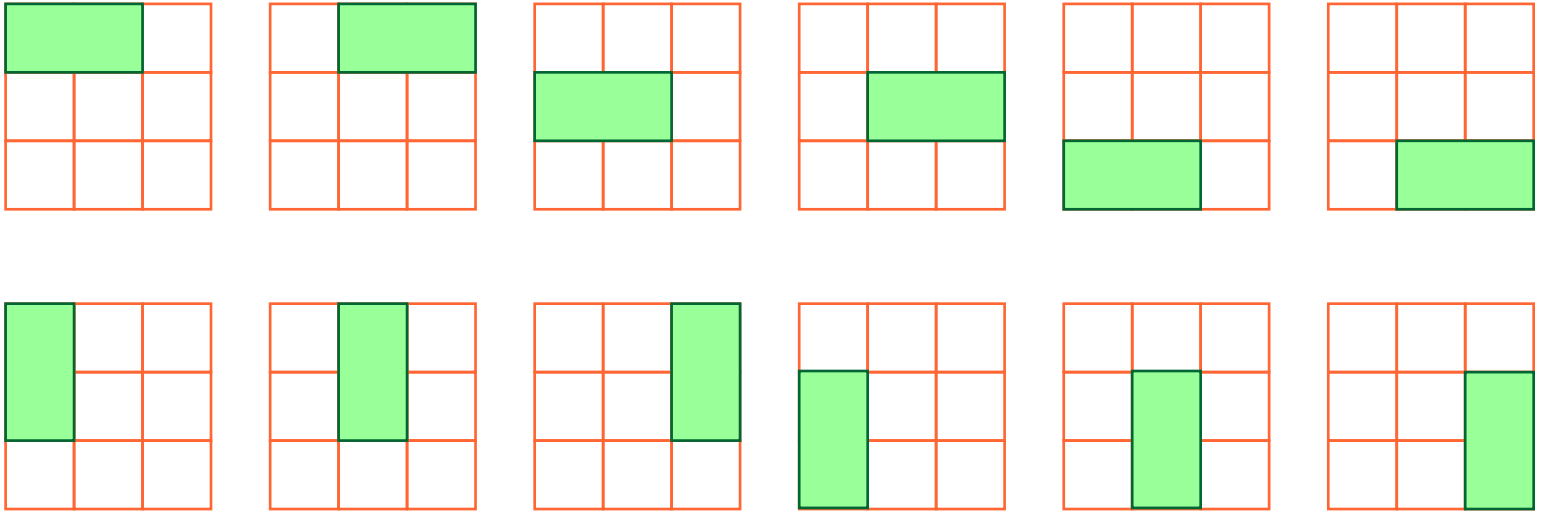


A domino can be placed on a  $3 \times 3$  checkerboard in 12 different ways:



The first player places the domino and the second player selects one of the 9 squares. If the selected square is covered by the domino, the payoff to player I is \$5. Otherwise, the payoff to player I is \$1. (Notice there is never a negative payoff, so player I is always a winner.) What are the optimal mixed strategies for players I and II?

Exploit symmetry to reduce the number of choices available to each player. (Player I really has only two choices, and player II really has only three). Show your work. State your answer clearly, and also state the value of the game.