$$\forall(i,j:\mathbb{N}|0\leq i<2\wedge 0\leq j<2:$$
$$\quad\exists(k,l:\mathbb{N}|0\leq k<2\wedge 0\leq l<2\wedge(k\neq i\wedge l\neq j):$$
$$\quad\quad\exists(m,n:\mathbb{N}|0\leq m<2\wedge 0\leq n<2\wedge(m\neq k\wedge n\neq j)$$
$$\quad\quad\wedge i-k=-(i-m)\wedge j-l=-(j-n)):$$
$$\quad\quad\quad board[i][j]=board[k][l]=board[m][n])$$