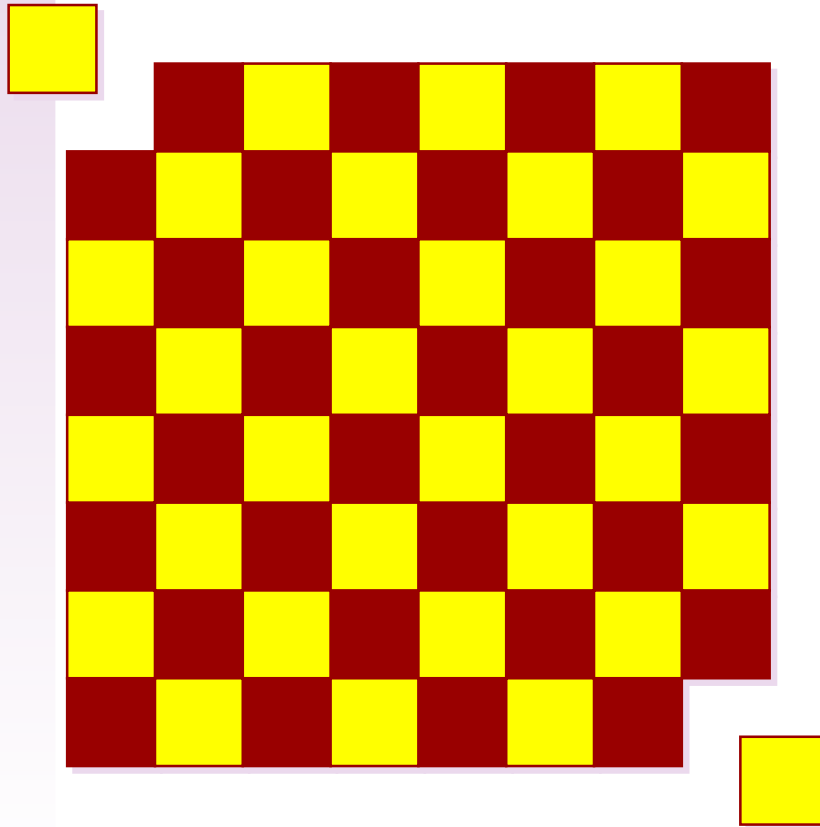


Treasure of Classic
and Modern Puzzles

Math 'n' Logic Puzzles



The Mutilated Chessboard

after Martin Gardner

A chessboard can be fully covered with 32 dominoes in size of two adjacent squares on the board.

Suppose we cut off two corner squares of the chessboard as shown in the illustration.

Now the question is if it's possible to cover entirely this new board (now consisting of just 62 squares) with the 31 dominoes?

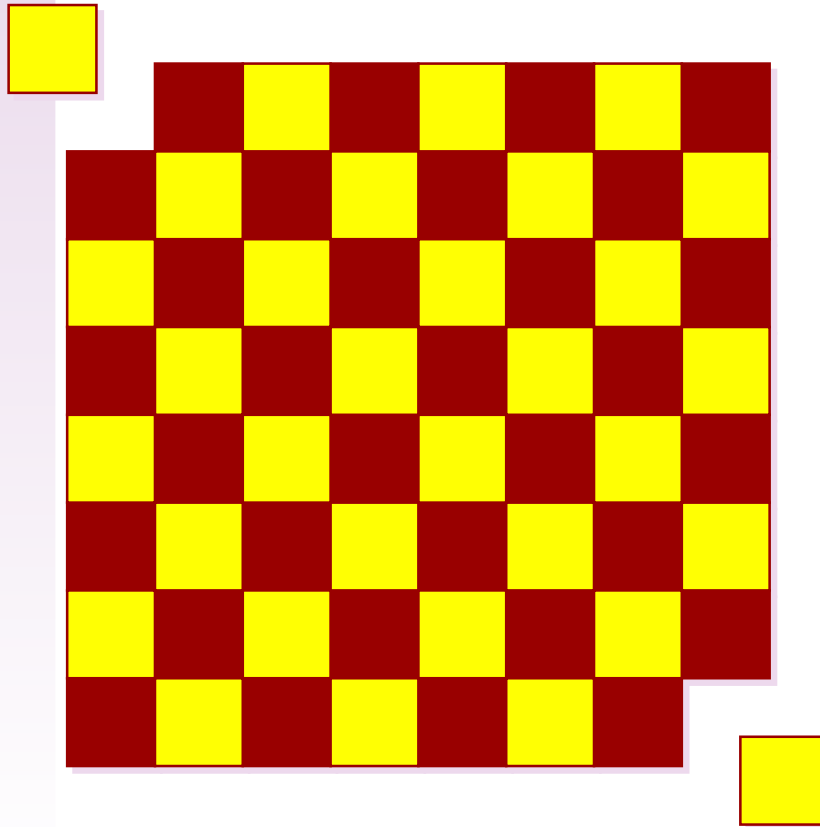
February 29, 2004

www.puzzles.com

Copyright © 2004 ThinkFun Inc. All Rights Reserved. webmaster@ThinkFun.com
Permission is granted for personal use only. This puzzle may not be duplicated for personal profit.

Treasure of Classic
and Modern Puzzles

Math 'n' Logic Puzzles



The Mutilated Chessboard (solution)

The chessboard without two opposite corner squares can't be covered with 31 dominoes because these squares are of the same color! When we remove them, the mutilated board of 62 squares will contain two more squares of one color than of the other.

Each domino always covers two adjacent squares of the chessboard which are always of opposite color. So when you cover (in ANY possible way) 60 squares with 30 dominoes, you will have two squares left, but, unfortunately, of the same color. These two squares are not of opposite color, so they can't be adjacent in any way. Therefore the last domino can't cover them.

February 29, 2004

www.puzzles.com

Copyright © 2004 ThinkFun Inc. All Rights Reserved. webmaster@ThinkFun.com
Permission is granted for personal use only. This puzzle may not be duplicated for personal profit.