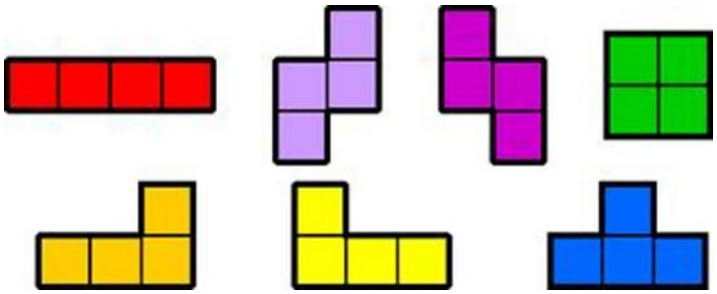
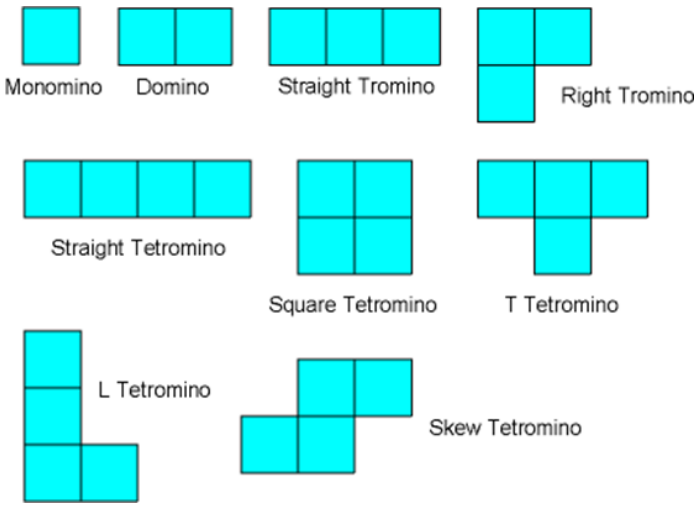
TETRIS tiles (``tetrominoes”):

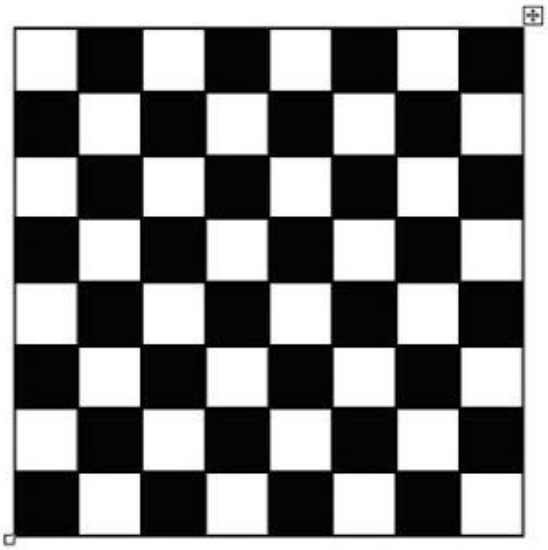


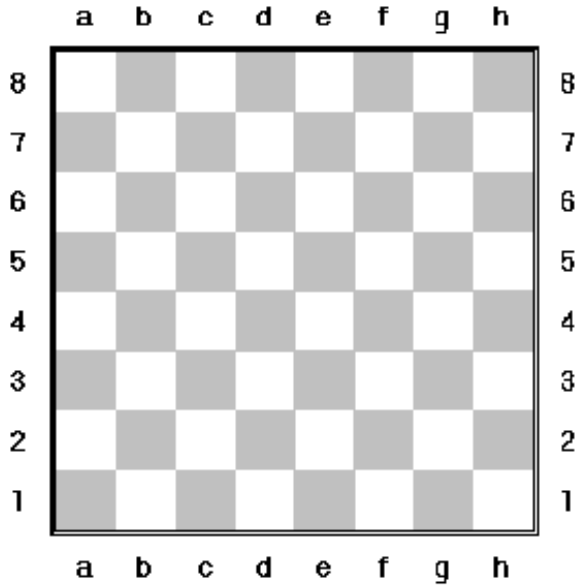
Dominoes, Trominoes, Tetrominoes:



Chessboard: 8 x 8 square.

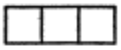
64 little squares = 32 black + 32 white.



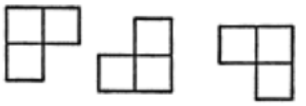


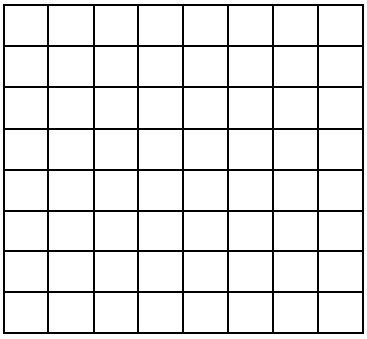
IN ALL THESE PROBLEMS WE ARE ALLOWED TO ROTATE THE TILES BEFORE WE PLACE THEM.

Question 1: Can you tile the chess board with dominoes ? 

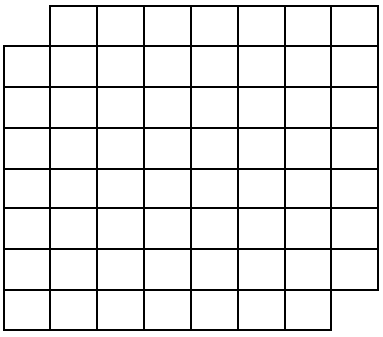
Question 2: Can you tile the chess board with straight trominoes  or

right trominoes  ? (We are always allowed to rotate them: For example, use  , or

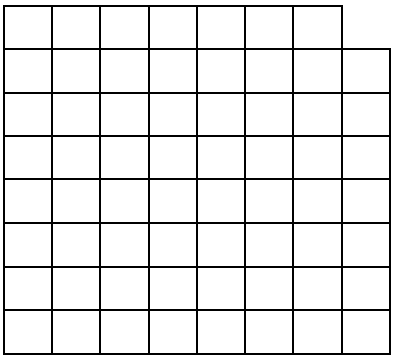
 )

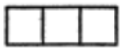


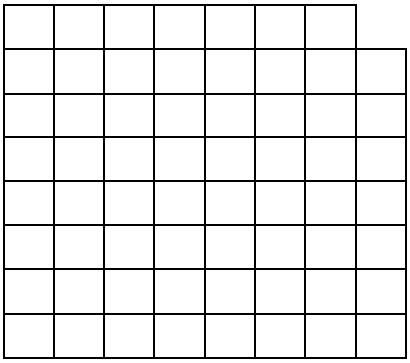
Question 3: Say I remove from the chess board the two white squares in the corners. Can you tile what is left with dominoes ? 



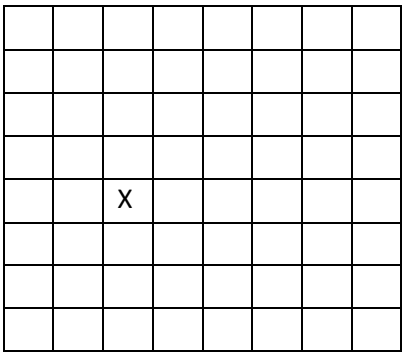
Question 4: Say I remove from the chess board the black corner on the top. Can you tile what is left with right trominoes  ?

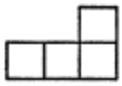
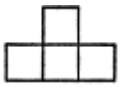
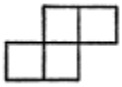


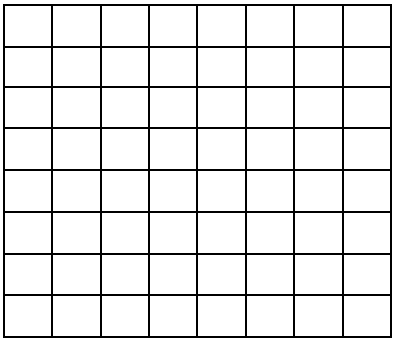
Question 5: Same shape as before, but how about with straight trominoes  ?

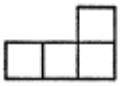


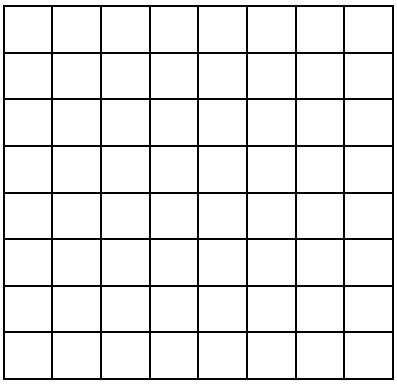
Question 6: Say I remove from the chess board just one (random) square. Can you tile what is left with right trominoes  ?



Question 7: Can you cover the chess board with 16 L-tetrominoes  ? 16 T-tetrominoes  ? 16 S-tetrominoes ? 

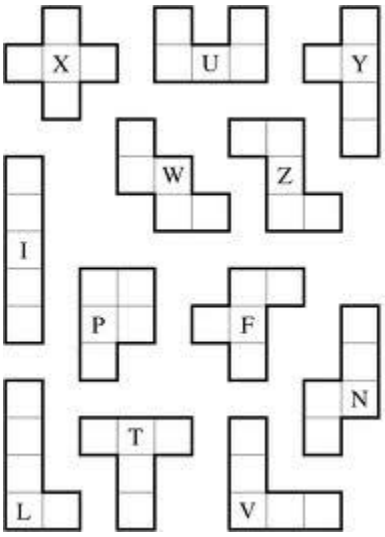


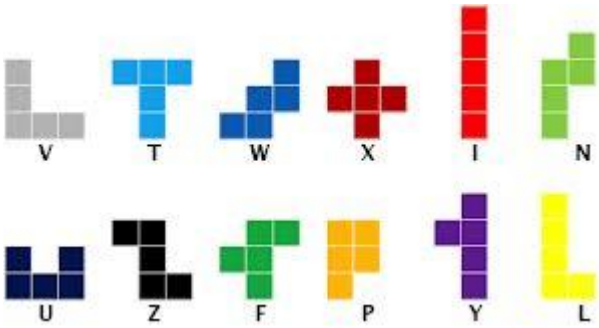
Question 8: Can you cover the chess board with 15 L-tetrominoes  and 1 square tetromino  ?



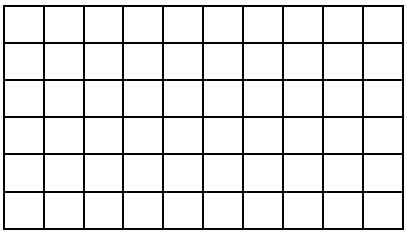
Pentominoes: ``Pente"=five (in Greek)

Can ``grow them" from the tetrominoes by adding a square.




Puzzle: Can you fit all 12 pentominoes in the picture above in a 6 x 10 rectangle?



Problems: How many different ``sixominoes" (with six squares) are there?

How about ``heptominoes" (with seven squares) ?

How about 3D? ``tetrocubes"?