CSIT113
Problem Solving

Workshop – Week 7

$2n$-Counters Problem

For any $n > 1$, place $2n$ counters on an $n \times n$ board so that no more than two counters are in the same row, column, or diagonal.

Straight Tromino Tiling

A straight tromino is a 3 × 1 tile. Obviously, one can tile any $n \times n$ square with straight trominoes if n is divisible by 3. Is it true that for every $n > 3$ that is not divisible by 3, one can tile an $n \times n$ square with straight trominoes and a single 1 × 1 tile called a monomino? If it is possible, explain how; if it is not, explain why.