



Bilkent University
Department of Mathematics

PROBLEM OF THE MONTH

Term: March 2020

Each unit square of 2020×2020 grid is painted into either red or white colour. Suppose that among four unit squares belonging to the intersection of any two lines and any two columns there are two same-coloured unit squares lying in the same line or in the same column. Find the minimal possible value of the total number of mono-coloured lines and columns.