Bilkent University
Department of Mathematics

PROBLEM OF THE MONTH

Term: July-August 2015

A coloring of all plane points with coordinates belonging to the set $S = \{0, 1, \ldots, 99\}$ into red and white colors is said to be *reddish* if for each $i, j \in S$ at least one of the four points $(i, j), (i+1, j), (i, j+1)$ and $(i+1, j+1)$ $(99 + 1 \equiv 0)$ is colored red. Find the maximal possible number of red points in a reddish coloring which loses its property after recoloring of any red point into white.