Bilkent University
Department of Mathematics

PROBLEM OF THE MONTH

Term: September 2021

There are 777 points located on a circle ω each coloured into one of the colours $1, 2, \ldots, k$. For each of these points and for each colour $1 \leq r \leq k$ there exists an arc of ω containing this point such that at least half of the points located on this arc are r coloured. Find the maximal possible value of k.