



Bilkent University
Department of Mathematics

PROBLEM OF THE MONTH

Term: July-August 2017

There are 2017 nonempty bags each containing finite number of colored balls. Find the smallest value of k for which no matter how the contents of bags are arranged the bags can be distributed into k boxes so that for each box at least one of the following two conditions is held:

- all bags of a box contain a ball of the same color
- each bag of a box contains a ball colored differently from all balls of all other bags of this box.