



Bilkent University
Department of Mathematics

PROBLEM OF THE MONTH

Term: December 2014

Winnie The Pooh knows that the pouch contains 100 candies numbered $1, 2, \dots, 100$ and 50 of the candies are white and 50 of the candies are yellow. At each move

◦ he randomly draws a candy from the pouch and puts it on the tray

and after that

◦◦ *if wishes* he chooses two candies of the *same* color among the candies on the tray and eats them.

When Winnie The Pooh eats candies numbered a and b he gets $|a - b|$ points. Suppose that after 100 moves Winnie The Pooh can guarantee to earn k points in total. Find the maximal possible value of k .