



Bilkent University
Department of Mathematics

PROBLEM OF THE MONTH

Term: April 2017

For each real number t let $g(t)$ be the total number of functions $f : \mathbb{R} \rightarrow \mathbb{R}$ satisfying

$$f(xy + f(y)) = f(x)y + t$$

for all real numbers x, y . Determine the function $g(t)$.