



Bilkent University
Department of Mathematics

PROBLEM OF THE MONTH

Term: March 2010

Find all functions $f : \mathbf{Q} \rightarrow \mathbf{Q}$ satisfying $f(1) = 2$ and $f(xy) + f(x + y) = f(x)f(y) + 1$, where \mathbf{Q} denotes the set of all rational numbers.