



Bilkent University
Department of Mathematics

PROBLEM OF THE MONTH

Term: June 2016

Show that for all nonnegative real numbers a, b, c satisfying $a^2 + b^2 + c^2 \leq 3$ the following inequality holds:

$$(a + b + c)(a + b + c - abc) \geq 2(a^2b + b^2c + c^2a)$$