



Bilkent University
Department of Mathematics

PROBLEM OF THE MONTH

Term: April 2009

Let x, y, z be positive real numbers satisfying $x + y + z = 1$.

Prove that

$$\frac{x(y+z)}{4-9yz} + \frac{y(z+x)}{4-9zx} + \frac{z(x+y)}{4-9xy} \geq 6xyz.$$