Bilkent University
Department of Mathematics

Problem Of The Month

Term: February 2016

Find the greatest real number T satisfying

$$\frac{(x^2+y)(x+y^2)}{(x+y-1)^2}+\frac{(y^2+z)(y+z^2)}{(y+z-1)^2}+\frac{(z^2+x)(z+x^2)}{(z+x-1)^2}-2(x+y+z)\geq T$$

for all real numbers x, y and z such that $x+y\neq 1, y+z\neq 1, z+x\neq 1$.