



Bilkent University
Department of Mathematics

PROBLEM OF THE MONTH

Term: September 2020

Suppose that for some real number M and all real numbers x, y, z satisfying $0 < x, y, z < 1$

$$\frac{xyz(x + y + z) + (xy + yz + zx)(1 - xyz)}{xyz\sqrt{1 - xyz}} \geq M.$$

Find the maximal possible value of M .