Bilkent University
Department of Mathematics

Problem Of The Month

Term: December 2017

Show that for all positive real numbers $a_1, a_2, \ldots, a_{2017}$ satisfying $a_1 a_2 \cdots a_{2017} = 1$ the following inequality is held:

$$\sum_{i=1}^{2017} \frac{a_i}{1+a_i} \leq \frac{1}{2} \sum_{i=1}^{2017} \frac{1}{a_i}$$