



Bilkent University
Department of Mathematics

PROBLEM OF THE MONTH

Term: July-August 2023

Find the minimal value of

$$\frac{(a^2 + b^2 + 2c^2 + 3d^2)(2a^2 + 3b^2 + 6c^2 + 6d^2)}{(a + b)^2(c + d)^2}$$

where a, b, c, d are positive real numbers.