

UNCP Math Club Challenge Problems

Dr. Elliott Hollifield

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Challenge Problem 1

Let $x_1, x_2, x_3, \dots, x_{2022}$ be positive integers. Find the smallest possible value for the quantity

$$\left(x_1 + x_2 + x_3 + \dots + x_{2022}\right) \cdot \left(\frac{1}{x_1} + \frac{1}{x_2} + \frac{1}{x_3} + \dots + \frac{1}{x_{2022}}\right)$$

Justify your answer. Solve this problem and email your solution by April 26th 2022 to Dr. Elliott Hollifield to win a special prize! elliott.hollifield@uncp.edu