Lewis & Clark College

Department of Mathematical Sciences

Problem of the Week #1 (Spring 2018)

Let $x_1, x_2, \ldots, x_{2018}$ be positive integers. Find the smallest possible value for the quantity

$$(x_1 + x_2 + \cdots + x_{2018}) \cdot \left(\frac{1}{x_1} + \frac{1}{x_2} + \cdots \frac{1}{x_{2018}}\right).$$

Please justify your answer.

- Solvers should include their name, address, and status at the College. Solutions can be mailed to MSC 110 via campus mail or placed in Yung-Pin Chen's mailbox in the Math Department Office. Solutions to the above *Problem of the Week* should be received by 5:00 p.m. Monday, January 29, 2018.