



Problem of the Week #5

10/24/2022 to 11/6/2022

Let x_1, x_2, \dots, x_n be positive real numbers, and let y_1, y_2, \dots, y_n be any rearrangement of those numbers. Prove that

$$\frac{x_1}{y_1} + \frac{x_2}{y_2} + \dots + \frac{x_n}{y_n} \geq n.$$

Solutions for this problem can be submitted to Dr. Brian Miceli at bmiceli@trinity.edu. People who submit solutions will be acknowledged on the next problem. If you like these problems, you may be interested in the Putnam Exam, and more information on the Putnam Exam may be found [HERE](#).

Solutions to the previous problem were submitted by Ritwik Chaudhuri (India), Evan Fu (Beaverton, OR), Amelia Gibbs (TU), Ong See Hai (Singapore), Rob Hill (Gambrills, MD), Kipp Johnson (Beaverton, OR), Steve King (Pullman, WA), Hari Kishan (India), Tengiz Kutchava (Georgia, the country), Yann Michel (Paris, France), François Seguin (Amiens, France), Hicham Selmouni (Paris, France), and Zurab Zakaradze (Georgia, the country).