Problem 5 (due Monday, November 9)

Recall that $\lfloor a \rfloor$ denotes the floor of a, i.e. the largest integer smaller or equal than a. What is the smallest possible value of $\displaystyle \left\lfloor \frac{1}{x_1}\right\rfloor+\left\lfloor\frac{1}{x_2}\right\rfloor+\ldots +\left \lfloor\frac{1}{x_n} \right\rfloor$, where $x_1,x_2,\ldots, x_n$ are positive real numbers such that $x_1+\ldots +x_n=1$?

Yuqiao Huang is the only person who submitted a solution. His solution is very nice and it is based on a different idea than our solution. Both solutions are discussed in the following link Solution

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Permanent link:
https://www2.math.binghamton.edu/p/pow/problem5f20

Last update: **2020/11/10 03:54**