



MATH PROBLEM OF THE WEEK

Fall 2021

Problem 8

Let a_1, a_2, a_3, \dots be a sequence on nonnegative real numbers such that for every $n \geq 1$ we have

$$a_{n+2} \leq \frac{a_{n+1} + a_n}{n+2}.$$

Show that the series $\sum_{n=1}^{\infty} a_n$ converges.

We welcome solutions from everyone. The undergraduate participant from the NMSU main campus with the most correct solutions at the end of the semester will receive an award of \$500.

Solutions must be mathematically rigorous and originally obtained by the participants.

Deadline: Monday, November 15, 10 am

Send solutions to: mathpotw@nmsu.edu

More information at: <https://math.nmsu.edu/activities/math-problem-of-the-week.html>