



MATH PROBLEM OF THE WEEK

Spring 2024

Problem 1

Simplify

$$x = \frac{1}{\sqrt{6 + \sqrt{6 + \sqrt{6 + \dots}}}}$$

as a rational number. Justify your answer.

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. Participants will be notified if their solutions are correct within a week.

Deadline: Monday, February 19, 10 am

Next problem will be posted on February 19

Send solutions to: mathpotw@nmsu.edu

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