

NMU Math & CS Department
Problem of the Month, February 2025

Enjoy the February problem of the month!

See next page for rules and information.

Let n be an integer. Find all real values of x that solve the equation:

$$x^n + \frac{1}{x^n} = 2025.$$

The NMU Mathematics and Computer Science Department invites you to participate in the 2024/2025 Problem of the Month contest to have some fun and get a little recognition. There are paper copies of the problems available at the department front desk if you'd like.

Rules: Anyone is welcome to submit a solution, and all correct solutions will be recognized; but only undergraduates enrolled in coursework at NMU are eligible to win the prize at the end of the year. The first student to submit a correct solution is the winner of the month. The top problem solver for the academic year will receive a fabulous prize, and be recognized at the department year-end celebration. You must write clear and complete solutions to the problems. You must include your name, NMU ID, address, phone, email, and exact date/time of your submission. You may either submit in person at the department front desk (use a staple if there are multiple pages), or email your solution in pdf format to darowe@nmu.edu.