MATH PROBLEM OF THE WEEK

Spring 2025

Problem 6

Find all real solutions for x in the following equation:

$$\frac{8^x - 27^x}{12^x - 18^x} = \frac{7}{2}.$$

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, March 31, 10 am
Next problem will be posted on April 1