

# UC Merced Applied Math Problem of the Month

March 2025

Using  $x + \frac{1}{x} = -\sqrt{3}$ , compute

$$x^2 + \frac{1}{x^2} = ? \quad x^3 + \frac{1}{x^3} = ? \quad x^4 + \frac{1}{x^4} = ?$$

$$\text{How about } x^{2025} + \frac{1}{x^{2025}} = ?$$

To submit your solutions for a chance to win an Amazon gift card, and to find out detailed contest rules,

- scan the QR code, or
- go to <https://bit.ly/UCM-POTM>

