## **UC Merced Applied Math Problem of the Month**

September 2025

Answer the following seemingly unrelated questions.

**Q1.** Which one is greater?  $\frac{22}{7}$  vs.  $\pi$ 

**Q2.** Evaluate the integral:  $\int_0^1 \frac{x^4(1-x)^4}{1+x^2} dx$ 

Can you now relate these two questions?

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 <a href="https://bit.ly/UCM-POTM">https://bit.ly/UCM-POTM</a>

