



UNIVERSITY OF WISCONSIN  
**PLATTEVILLE**  
DEPARTMENT OF MATHEMATICS

PROBLEM OF THE WEEK #8  
(Spring 2023)

Simplify:  $\sin^2 \frac{\pi}{14} + \sin^2 \frac{3\pi}{14} + \sin^2 \frac{5\pi}{14}$ .

[Please fully explain your answer.]

Email solutions to [kwonmi@uwplatt.edu](mailto:kwonmi@uwplatt.edu) by 2:00pm on Wednesday, March 29, 2023.

Every week, the best solution submitted earns a \$10 Platteville gift certificate; the top scorer each semester also wins a cash award. Good luck!

You can always see the Problem of the Week (and complete rules) online at:

<http://uwpmath.weebly.com/>