



UNIVERSITY OF WISCONSIN
PLATTEVILLE
DEPARTMENT OF MATHEMATICS

PROBLEM OF THE WEEK #8
(Fall 2021)

Prove that if $t > 0$, then $(\arctan t) \left(\arctan \frac{1}{t} \right) > \frac{t}{2(t^2 + 1)}$.

[Please fully explain your answer.]

Email solutions to kwonmi@uwplatt.edu by 2:00pm on Wednesday, November 10, 2021.

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/>