# PROBLEM OF THE WEEK #4
(Spring 2023)

Let P be a polygon whose edges have been painted either blue or orange, in such a way that the edges next to an orange edge are always blue. (However, blue edges may be next to each other.) Prove: if the sum of the lengths of the orange edges is greater than the sum of the lengths of the blue edges, then you can't inscribe a circle in P (that is, no circle is tangent to every edge of P).
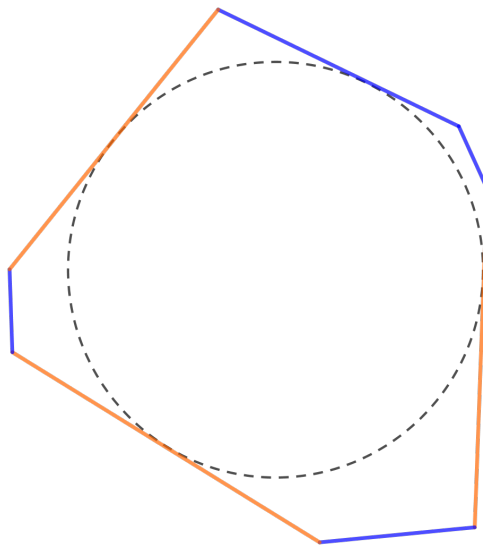
[Please fully explain your answer.]

Email solutions to `kwonmi@uwplatt.edu` by 2:00pm on Wednesday, February 22, 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/`