UNIVERSITY OF WISCONSIN
PLATTEVILLE
DEPARTMENT OF MATHEMATICS

Problem of the Week #8

(Fall 2020)

Let $\{a_1, a_2, \dots\}$ be a strictly increasing sequence of positive integers: if $m > n$, then $a_m > a_n$. Assuming that $a_{(a_n)} = 3n$ for every positive integer n, find a_{1000}.

[Please fully explain your answer.]

Email your solution to `kwonmi@uwplatt.edu` by 4:00 P.M. on Wednesday, November 11, 2020.

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/`