



PROBLEM OF THE WEEK #9  
(Spring 2021)

Suppose  $x_1 = 0$ ,  $x_2 = 1$ , and when  $n \geq 1$ ,

$$x_{n+2} = x_{n+1} + \frac{x_n}{n}.$$

Find  $\lim_{n \rightarrow \infty} \frac{n}{x_n}$ .

[Please fully explain your answer.]

Email your solution to [kwonmi@uwplatt.edu](mailto:kwonmi@uwplatt.edu) by 4:00pm on Wednesday, March 31, 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/>