PROBLEM OF THE WEEK #8
(Spring 2021)

Find every set $\{(a,p),(b,q)\}$ of distinct ordered pairs of positive integers such that, for all n,

$$\left[\sum_{i=1}^{n} i^a\right]^p = \left[\sum_{j=1}^{n} j^b\right]^q.$$

[Please fully explain your answer.]

Email your solution to `kwonmi@uwplatt.edu` by 4:00pm on Wednesday, March 24, 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/`