



UNIVERSITY OF WISCONSIN
PLATTEVILLE
DEPARTMENT OF MATHEMATICS

PROBLEM OF THE WEEK #7
(Spring 2021)

The toy shown here is the Fisher-Price Giant Rock-a-Stack. It has six colored rings with holes of different sizes that fit over a tapered post. When you drop a ring onto the post, it slides down until it either reaches its “proper” place or lands on another ring that’s already on the post. Rings won’t stay on the post if they’re stacked above the smallest ring’s proper place.

How many different stacks can be formed on the post using at least one ring?



Image: <https://smile.amazon.com/Fisher-Price-GJW15-Giant-Rock-A-Stack/dp/B07PFYWWDQ/>

[Please fully explain your answer.]

Email your solution to kwonmi@uwplatt.edu by 4:00pm on Wednesday, March 17, 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/>