



Problem of the Week #1

8/29/2022 to 9/11/2022

The mythical *mathipede* grows at a rate of 1 meter per hour, and when they reach their maximum length of 1 meter, they stop growing. In addition, any full-grown mathipede may be cut into two parts totaling a length of 1 meter, and then those two mathipede parts immediately begin to grow at a rate of 1 meter per hour until fully grown. This process of dissection may be repeated on any full-grown mathipede. Is it possible, starting with one full-grown mathipede, to obtain ten full-grown mathipedes in less than an hour?

Solutions for this problem can be submitted to Dr. Brian Miceli at bmiceli@trinity.edu. People who submit solutions will be acknowledged on the next problem. If you like these problems, you may be interested in the Putnam Exam, and more information on the Putnam Exam may be found [HERE](#).

Solutions to the summer problem were submitted by Ziad Aramouni (Lebanon), M.V. Channakeshava (India), Ritwik Chaudhuri (India), Evan Fu (Beaverton, OR), T.J. Gaffney (Las Vegas, NV), Rob Hill (Gambrills, MD), Vaishnavi Josyula (Frisco, TX), Lukas Klawuhn (Germany), Tengiz Kutchava (Georgia, the country), Yann Michel (Paris, France), Benjamin Phillabaum (Lafayette, IN), François Seguin (Amiens, France), Hicham Selmouni (Paris, France), and Zurab Zakaradze (Georgia, the country).