



UNIVERSITY OF WISCONSIN
PLATTEVILLE
DEPARTMENT OF MATHEMATICS

PROBLEM OF THE WEEK #4
(Spring 2017)

An island has a population of chameleons. Currently, 34 of them are red, 21 are green, and 47 are blue. Whenever two chameleons of different colors meet, they both change to the third color. There are no color changes otherwise. Is it possible that at some future time, after a sequence of meetings, all of the chameleons will be the same color?

[Please fully explain your answer.]

Solutions should be submitted to Cinda Furry, in Gardner Hall 435, by 4:00 P.M. on Wednesday, February 22, 2017.

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/>