



Problem of the Week #9

12/19/2022 to 1/15/2023

On a circle are 999 points numbered 1 to 999. We wish to color each of the points with the colors blue, red, and green such that between any two points colored with the same color there are an even number of colored points differing from these two. In how many ways can we color these 999 points?

Have a wonderful holiday season and a Happy New Year!

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Solutions for this problem can be submitted to Dr. Brian Miceli at [bmiceli@trinity.edu](mailto: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](#).

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Solutions to the previous problem were submitted by Ziad Aramouni (Lebanon), Ritwik Chaudhuri (India), Evan Fu (Beaverton, OR), Amelia Gibbs (TU), Ong See Hai (Singapore), Rob Hill (Gambrills, MD), Kipp Johnson (Beaverton, OR), Hari Kishan (India), Tengiz Kutchava (Georgia, the country), Tin Lam (St. Louis, MO), Surajit Rajagopal (India), François Seguin (Amiens, France), and Zurab Zakaradze (Georgia, the country).