Each New Year’s Eve, Alice likes to say goodbye to the year by flipping a coin the number of times corresponding to the outgoing year. Her antagonistic brother, Bob, says he prefers to forget the past year by ringing in the new year, so he always flips a coin the number of times corresponding to the incoming year; moreover, Bob always makes a bet with Alice that he will flip more heads than she will. What is the probability that Bob wins the bet this year by flipping more heads in his 2020 tosses than Alice does in her 2019 tosses?

And Happy New Year!

Solutions to the last problem were submitted by Ziad Aramouni (Lebanon), Otar Beridze (Georgia, the country), Suliko Bolkvadze (Georgia, the country), Phil Boyd (Manchester, England), Adam Cordeiro (Japan), T.J. Gaffney (Las Vegas, NV), Rob Hill (Gambriils, Maryland), Hari Kishan (India), Tengiz Kutchava (Georgia, the country), Manuel Guillermo Flota López (Mérida, México), Jorge Roberto Pech May (Campeche, México), Yann Michel (Paris, France), Benjamin Phillabaum (Bothell, WA), Luciano Santos (Portugal), Michael Tomaine (Bellevue, WA), and Zurab Zakaradze (Georgia, the country).

Solutions for this problem can be submitted to Dr. Brian Miceli at bmiceli@trinity.edu, or you can drop them off at his office, MMH 115F. 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](#).