

Problem of the Month, October 2009

Please turn all solutions into Dr. Dunn's office, JB 322. You may slide your solutions under his door as well. Most elegant solution wins a \$10 gift certificate to the bookstore! Solutions will be accepted anytime during the month of October. Good luck!

True or False: There exists square matrices A and B with the property that the trace of the matrix $AB - BA$ is nonzero. (Recall: the trace of a matrix is the sum of the entries on its diagonal.)