Problem of the Week #3
9/18/2017 to 10/1/2017

Consider the product $1! \cdot 2! \cdot 3! \cdots 100!$. Is it possible to remove one of the terms from this product and have the remaining product be a perfect square?

Solutions to the last problem were submitted by Matthew Brom (Troy, NY), Adrian Castro (Austin, TX), M.V. Channakeshava (India), R. Govindan (India), Matthew Grimm (Waubonsee MEC Club), Rob Hill (Gambrills, Maryland), Lincoln James (Chicago, IL), Kipp Johnson (Beaverton, OR), Jack Kennedy (San Antonio), Steve King (Pullman, WA), Hari Kishan (India), Tin Lam (St. Louis, MO), Tom O’Neil (Central Coast of CA), Benjamin Phillabaum (Northbrook, IL), Surajit Rajagopal (India), Luciano Santos (Portugal), and Yian Ann Xu (Trinity).

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 with correct solutions will be acknowledged on the next problem. For old problems, follow the “Problem of the Week” link at www.trinity.edu/bmiceli, and if you like these problems, you may be interested in the Putnam Exam. More information on the Putnam Exam can also be found at www.trinity.edu/bmiceli.