1173-20-66 **Gizem Karaali*** (gizem.karaali@pomona.edu) and **Samuel Yih**. *Explanatory Proofs in Abstract Algebra: Explaining the Magic of the Number 3.*

When first learning how to write mathematical proofs, it is often easier for students to work with statements using the universal quantifier. Results that single out special cases might initially come across as more puzzling or even mysterious. Explanatory proofs, in the sense of Steiner, transform what might initially seem mysterious or even magical into lucid mathematics. In this talk we describe three specific statements from abstract algebra that involve the number three, whose proofs are explanatory. (Received September 14, 2021)