

1125-C1-2804 **Elise Lockwood***, 064 Kidder Hall, Department of Mathematics, Corvallis, OR 97331. *How to Help Your Students Prove Combinatorial Identities.*

Proving combinatorial identities is an important mathematical skill that requires nuance and can be a mysterious undertaking for students. To learn how students reason about combinatorial proof, I gave a pair of undergraduate students a series of tasks designed to help them prove combinatorial identities. In this talk, I share results from these interviews, including a) beneficial interventions that helped students prove combinatorial identities, and b) students' productive and unproductive ways of thinking about combinatorial proof. I draw upon a model of students' combinatorial thinking (Lockwood, 2013) in order to frame this discussion. I conclude with tips for how to effectively incorporate combinatorial proof in your classroom. (Received September 20, 2016)