

1135-E1-3157      **Ethan Berkove\*** ([berkovee@lafayette.edu](mailto:berkovee@lafayette.edu)), Department of Mathematics, Lafayette College,  
Easton, PA 18042. *Hands-on group theory: worksheets and beyond.*

How do you get students to engage in real-time with the material in abstract algebra? We'll discuss how we used in-class worksheets and group work to give students hands-on experience to build their intuition about groups and rings as well as notions like order, symmetry, isomorphism and homomorphism. In addition, we'll describe how we extended some of the worksheet problems to more complicated homework examples involving symmetry groups of polyhedra and the Rubik's Cube. In the latter case, one student's work led her to an open problem in mathematics and her first experience reading a mathematical paper. (Received September 26, 2017)