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Generalizing is one of the most fundamental practices with which mathematics students engage. Although generalization among young students has been under much investigation, there is more to learn about generalization in more advanced, specifically undergraduate, contexts. Problems in combinatorics provide a useful context in which to explore generalization because they are challenging but accessible, and they require deep mathematical thought. While research has been conducted on students' combinatorial reasoning, there has not been work that has explicitly investigated the role of generalization in the context of solving counting problems. To study generalization in this context, we conducted individual interviews with undergraduates who had not previously taken discrete mathematics. In this talk, we present multiple kinds of generalizing activities that emerged as students completed counting tasks involving passwords. The nature of the students' generalizing activity varied from simply observing numerical patterns to creating and leveraging abstract outcomes with a general structure, and we present different cases to demonstrate this variety. We also discuss the relationship between generalizing activity and the depth and nature of students' combinatorial reasoning. (Received September 16, 2015)