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Eyob S Demeke and **May Chaar*** (mej29@wildcats.unh.edu), Kingsbury Hall, 33 Academic Way, Durham, NH 03824. *The Role of Proof in Undergraduate Mathematics: A Case Study of Lagrange's Theorem*. Preliminary report.

In typical undergraduate advanced mathematics courses, professors spend ample class time presenting proofs; however little is known with regards to what students actually gain from these experiences. In our preliminary report we attempt to address this gap, specifically with respect to a proof of Lagrange's theorem. We used Mejia-Ramos and colleagues' (2012) model in designing a proof comprehension test and task-based interviews to shed light on (1) the extent to which undergraduates comprehend the proof and (2) what undergraduates gain or learn from reading the proof. Initial examination of our data reveals that although the participants could follow the proof line by line, they had difficulty identifying key ideas and summarizing the proof. Participants acknowledged their responsibility to fill in gaps in proofs; yet they had trouble justifying non-trivial assertions. Despite participants' superficial comprehension of the proof, we still observed that participants gained conviction and learned new definitions. (Received September 03, 2014)