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**Yelena Baishanski\***, ybaishanski@lagcc.cuny.edu, and **Reem Jaafar**. *How can we help students "do" mathematics? Writing activities to challenge thought and elicit mathematical understanding*. Preliminary report.

For students with little experience in mathematical thinking and conceptualization, writing-to-learn activities can be particularly effective in promoting discovery and understanding. For community college students embarking on a first Calculus course in particular, writing activities can help facilitate the transition from an “apply the formula” approach to problem-solving to a “discover the formula” initiation to mathematical knowledge-building. Having identified several common challenges faced by community college students in a beginning Calculus course—including difficulties using mathematical notation, applying theorems, and understanding the language of proofs—we present several writing-to-learn assignments, ranging from in-class activities to more formal, revised assignments, that address these difficulties. Showcasing student work and feedback to highlight the learning objectives different writing tasks help attain, we argue that writing-to-learn activities not only help students cement mathematical knowledge, deepen understanding and develop appreciation for the rigor and concision of mathematical language, but also enable students to develop questioning and learning habits essential to their success in any field. (Received September 25, 2012)