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James C. Price* (j.c.price@uafs.edu), University of Arkansas at Fort Smith, Department of Mathematics, 5210 Grand Avenue, P.O. Box 3649, Fort Smith, AR 72913-3649. *Using Dialogue Based Activities and Manipulatives in Inquiry Based Learning.*

Recently, I took over teaching college mathematics at my institution. While talking to my colleagues and consulting various reports on best practices in teaching such a course, I repeatedly came across the word activity. To be honest, I was somewhat perplexed at the time by what an activity in mathematics should be, but I was determined to try to incorporate it into my class. The result of these efforts was a series of dialogue based activities that use manipulatives and inquiry based learning to engage liberal arts students in mathematics. In this talk, I will present one of these activities, which is a dialogue between Pythagoras, an Egyptian Rope-Stretcher, and Hippiasus entitled, The Pythagorean Theorem. In it, a student discovers the origins of the Pythagorean Theorem, how it was used to prove the existence of irrational numbers, and how a simple manipulative can be used to prove why it is true. It is designed to help liberal arts students understand how mathematics is discovered and proved. (Received August 26, 2012)