

1077-L1-1247

Jackie A Hall* (hallja@longwood.edu), VA. *"I CAN PROVE IT" – Using Proofs of the Pythagorean Theorem to Bolster Confidence for the math-anxious Liberal Arts Mathematics Students.*

One of the projects in Mathematical Thinking, a Liberal Arts course designed specifically for the "I cannot do math" student, involves proving the Pythagorean theorem. In class we prove the theorem four different ways. Most of the students remember having been taught Pythagoras' theorem in high school; however, very few have ever seen an actual proof of the theorem.

After proving the theorem in class, the students are assigned (worth two quiz grades) to prove Pythagoras' theorem to someone else and to write about the experience. One grade is for the proof itself. It is graded for correctness just as if they were answering a test question "Prove the Pythagorean Theorem." The other quiz grade is given for the story they tell of proving the theorem. How did the proof go? What was the student's experience? What were the reactions of the person hearing the proof? Many students prove the Pythagorean theorem to a parent or sibling or old friend. The experience is generally quite positive. Many report the pleasure of parents or their own excitement and pride in themselves that they are able to prove such a fundamental truth to parents or friends. (Received September 18, 2011)