1023-01-1307 **David A. Steele*** (dsteele@unca.edu), Department of Mathematics, University of North Carolina at Asheville, Asheville, NC 28804. *Irrationality, Incommensurability, and the Euclidean Algorithm.*

Around the time of the Pythagoreans, the ancient Greeks tended to view all quantities as whole numbers or the ratio of two whole numbers. As such, they assumed that any two quantities could be measured by some common "unit" and hence were what they called "commensurable." Sometime before Plato it was discovered that some pairs of quantities did not have such a common measuring unit and hence were "incommensurable." Ultimately, this characterization serves as a precursor to what we think of as rational and irrational numbers. But, while we view individual numbers as being rational or irrational, the Greeks looked at incommensurability as the relationship between two quantities and were therefore able to apply the Euclidean Algorithm to their analysis. (Received September 27, 2006)