1014-01-717   **Victor J Katz*** (`vkatz@udc.edu`), 841 Bromley St., Silver Spring, MD 20902. *Proof in Islam, India, and China.* Preliminary report.

Mathematics is often characterized as the intellectual exercise of proving theorems and solving problems using logical reasoning and beginning with explicitly stated definitions and axioms. Certainly, Greek mathematics fits this characterization. The mathematicians of medieval Islam were the heirs of the Greek mathematicians. Having learned their lessons well, they were able to continue the Greek tradition and prove theorems and solve problems not considered by the Greeks themselves. They demonstrated a detailed knowledge of the nature of proof and often criticized "false" proofs. On the other hand, the mathematicians of medieval India and China apparently had no knowlege of Greek mathematics. Yet they created what they too considered to be a body of "mathematical" knowledge. We will first look at some examples of proofs in Islam and contrast these with arguments given in India and China. We will then look at how the transmission of only certain aspects of the mathematics of these cultures to Europe was reflected in the development of European mathematics through the seventeenth century. (Received September 22, 2005)