1035-X1-892   **Julie Belock** (`julie.belock@salemstate.edu`), 352 Lafayette St, Mathematics Department, Salem, MA 01970, and **Kate McGivney*** (`kgmcgi@ship.edu`), 1871 Old Main Dr., Mathematics Department, Shippensburg, PA 17257. *Origins of Trigonometric Functions.*

We present a series of student activities designed to lead students through the development of the use of sines and cosines. They will examine the appearance of sine tables in work of the ancient Greeks, the continuation in the work of medieval Indian mathematicians and on into the work of Islamic mathematicians. The intended audience consists of mathematics majors in a history of mathematics course. The materials will be classroom tested in such a course in fall 2007.

Activities include historical questions to be researched as well as mathematical problems. They include: research the origin of the words "sine" and "cosine"; research the motivation for developing trigonometric functions in each culture; compare and contrast the definitions and statements of results in Ancient Greek, Indian and Islamic cultures with more familiar versions learned in high school today; investigate the methods used by the ancients and use them to compute values in the tables; discuss what is known about the transmission of the knowledge of sines and cosines among the cultures. (Received September 17, 2007)