

1014-Z1-1482 **Terry J. Walters*** (Terry-Walters@utc.edu), Mathematics Department #6956, University of Tennessee at Chattanooga, 615 McCallie Ave., Chattanooga, TN 37403, and **Stephen W. Kuhn**. *Online Homework That Works*. Preliminary report.

Over the past several years we have developed, with support from NSF, a large number of homework assignments, primarily for precalculus and calculus, using the Web-based Homework System (WHS), a comprehensive system for managing homework assignments, developed by Mathematics faculty at the University of Kentucky. The WHS system, freely available for non commercial users, allows instructors to write and post problem sets as well as share, borrow, and revise sets from other instructors, and allows students to work computer-graded on-line problems, from simple drill to quite challenging problems, presented in standard mathematical notation. Using a package of software tools coded in Maple that are provided with the WHS system we generate multiple versions of each problem without many errors and give each student a personalized version of each assignment. Other features include: answers in all expected formats as well as mathematically checked multiple variable functions; instant feedback to students; and tools for monitoring student performance. Our presentation will include examples of exercises, pointers to our problem sets, student reactions, student results, and preliminary evaluation of our applications of WHS. (Received September 28, 2005)