

1086-N1-2848

Benjamin Wescoatt* (ben.wescoatt@gmail.com), Oklahoma State University, 401 MSCS, Stillwater, OK 74078. *Students' Idiosyncratic Usage of the Equal Sign While Verifying Trigonometric Identities*. Preliminary report.

This paper explores students' conceptions of verifying trigonometric identities. Despite providing opportunities for investigating many areas of student knowledge, students' conceptions involved in verifying trigonometric identities (VTI) have not been well-studied. To explore these conceptions, eight undergraduate trigonometry students were interviewed while engaged in VTI. The students were encouraged to think aloud as they solved the problems. Interview questions focused on understanding students' motivations for their problem solving decisions and actions. The transcripts of the interviews were analyzed using an open-coding method, and themes evolved. One theme pertained to students' idiosyncratic usage of the equal sign. This paper will provide examples from student interviews of their idiosyncratic usage and will discuss the meanings the usage has to each student. Instances of the equal sign being used as an organizational symbol were identified. Additionally, students used the equal sign to demonstrate tentative, temporal equality; successful verification of the identity transformed the tentative equality to equality. Some students constructed a visual cue to signal a successful verification by writing a reflexive equality as their final step. (Received September 25, 2012)