

1135-J5-1185 **Aubrey Kemp*** (akemp9@student.gsu.edu) and **Draga Vidakovic**. *Ways secondary mathematics teachers transfer and apply definitions from Euclidean to Taxicab context: An example of a real-life situation*. Preliminary report.

It has been known that definitions in mathematics are an integral part of understanding concepts, and are often not used correctly by students in mathematical proofs and problem-solving situations. In addition, research shows that by observing properties and making conjectures in non-Euclidean geometry, students can better develop their understanding of concepts in Euclidean geometry. To further investigate this, APOS Theory is used as the framework in this preliminary data analysis of responses to a real-life situation from eleven secondary mathematics teachers enrolled in a College Geometry course at a university in Fall 2016. Within the context of APOS Theory, this preliminary analysis provides illustrations of the conceptual understandings found among these participating teachers in relation to this real-life situation. By adapting and transferring their knowledge of definitions from Euclidean geometry to Taxicab geometry, these participating teachers demonstrated a variety of responses, providing detailed explanations of their thought processes. (Received September 20, 2017)