

**ZMATH 2010c.00290**

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**Intuitions of “infinite numbers”: Infinite magnitude vs. infinite representation.**

Mont. Math. Enthus. 6, No. 3, 305-330 (2009).

Summary: This study examines undergraduate students' emerging conceptions of infinity as manifested in their engagement with geometric tasks. Students' attempts to reduce the level of abstraction of infinity and properties of infinite quantities are described. Their arguments revealed they perceive infinity as an ongoing process, rather than a completed one, and fail to notice conflicting ideas. In particular, confusion between the infinite magnitude of points on a line segment and the infinite representation of real numbers was observed. Furthermore, students struggled to draw a connection between real numbers and their representation on a number line.

*Classification:* E65

*Keywords:* infinity; infinite numbers; intuition; magnitudes; real numbers; representations; concept formation; misconceptions