1052-55-167   **Kate Ponto*** (`kponto1@nd.edu`), 255 Hurley Hall, Notre Dame, IN 46556. *Additivity of the Reidemeister trace.* Preliminary report.

One of the most important properties of the Euler characteristic is additivity: If A is a subspace of B, the Euler characteristic of B is the sum of the Euler characteristics of A and B/A. The corresponding additivity property is also fundamental to the Lefschetz number and the Reidemeister trace. I will describe how additivity of the Reidemeister trace follows from the definition of this invariant as the trace in a bicategory with shadows. (Received August 26, 2009)