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Chris Camfield* (camfieldc@kenyon.edu), Department of Mathematics, Kenyon College,
Gambier, OH 43022. *Comparison of BV Norms in Weighted Euclidean Spaces.*

We will examine functions of bounded variation and sets of finite perimeter as defined by Baldi in weighted Euclidean spaces and also by Miranda Jr. in metric measure spaces. Since weighted Euclidean spaces are metric measure spaces, it is natural to ask whether these two definitions are equivalent or comparable. We will give conditions that ensure the two definitions are equivalent and provide examples of weights for which they are not even comparable. (Received February 03, 2009)