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Wilhelmina Wise* (ninadawn@gmail.com), Department of Mathematics, Oklahoma State University, Stillwater, OK 74078. *Reverse Triangle Inequalities for Infimums of Potentials.*

The triangle inequality $\inf_E \sum_{j=1}^m f_j \geq \sum_{j=1}^m \inf_E f_j$ holds for any real-valued functions f_j defined on a compact set E . We can find a reverse triangle inequality $\inf_E \sum_{j=1}^m p_j \leq C + \sum_{j=1}^m \inf_E p_j$ for potentials. We give sharp constants for certain potentials and connect these to polarization inequalities. The main tool we use is a Riesz representation for the farthest distance function. This function and the properties of its Riesz representing measure are the central topic of my dissertation. (Received November 28, 2012)