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Torrey M Gallagher* (tmg34@pitt.edu), 618 Kirtland St, Pittsburgh, PA 15208. *Mean isometries are isometries*. Preliminary report.

In 2007, Goebel and Japon-Pineda introduced the so-called “mean nonexpansive” mappings as an extension to the usual class of nonexpansive mappings. They proved that a Banach space has the fixed point property for a nontrivial subclass of mean nonexpansive maps provided that the underlying space has the fixed point property for nonexpansive maps. Some interesting fixed point theorems have also been proven about isometries acting on closed, bounded, and convex subsets of certain spaces. We show that the extension of any fixed point theorem for isometries to mean isometries is trivial; that is, we show that a function on a metric space is an isometry if and only if it is a mean isometry. (Received September 21, 2015)