On Wigner's theorem in strictly convex normed spaces

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Abstract. In this note, we generalize the well-known Wigner's theorem. Let X and Y be real normed spaces and Y strictly convex. We show that $f \colon X \to Y$ satisfies $\{\|f(x) + f(y)\|, \|f(x) - f(y)\|\} = \{\|x + y\|, \|x - y\|\}$, $x, y \in X$, if and only if f is phase equivalent to a linear isometry.

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