The most natural convexities in a graph $G = (V,E)$ are path convexities defined by a system $\mathcal{P}$ of paths in $G$ that contain all geodesics. The canonical choices for $\mathcal{P}$ are provided by selecting all paths, triangle paths, minimal paths and geodesics. The standard convexity is the geodesic convexity in which a vertex set $S$ is said to be (geodesically) convex if $S = I[S]$, where $I[S]$ (called the geodetic closure of $S$) is the set of all shortest $x - y$ paths (also called geodesics) for every $x, y \in S$. A set of vertices is called geodesic if $I[S] = V$, and it is said to be a hull set if $\{S\} = V$, where $\{S\}$ (called the convex hull of $S$) is the smallest convex set containing $S$. Certainly, every geodetic set is a hull set. Given a vertex set $W$, a Steiner $W$-tree is a tree containing $W$, of minimum order. Moreover, $W$ is called an Steiner set if $S(W) = V$, where $S(W)$ (called the Steiner interval of $W$) is the collection of all vertices of $G$ which lies on some Steiner $W$-tree. Contrarily to what was stated in a recent published paper [Disc. Math. 242 (2002), no. 1-3, 41–54.] we have proved that not every Steiner set is a geodesic set. Going one step further, we have approached the following question: Is every Steiner set a Hull set?.

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