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Property of being semi-Kelley
for the cartesian products and hyperspaces

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Abstract: In this paper we construct a Kelley continuum X such that $X \times [0, 1]$ is not semi-Kelley, this answers a question posed by J.J. Charatonik and W.J. Charatonik in *A weaker form of the property of Kelley*, Topology Proc. **23** (1998), 69–99. In addition, we show that the hyperspace $C(X)$ is not semi-Kelley. Further we show that small Whitney levels in $C(X)$ are not semi-Kelley, answering a question posed by A. Illanes in *Problemas propuestos para el taller de Teoría de continuos y sus hiperespacios*, Queretaro, 2013.

Keywords: continuum; property of Kelley; semi-Kelley; cartesian products; hyperspaces; Whitney levels

AMS Subject Classification: Primary 54F15, 54B20, 54G20

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