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Daniel Slilaty* (daniel.slilaty@wright.edu), Wright State University, Department of Mathematics and Statistics, Dayton, OH 45435. *The signed graph $-K_5$* . Preliminary report.

In the study of linear programming, matroids, and graph theory, signed graphs have become a prominent feature. (A signed graph is a graph along with a labeling of the edges with elements of the group of order 2, often denoted by $\{+1, -1\}$.) In many places where signed graphs are used, the signed graph $-K_5$ appears and plays an important role. (The signed graph $-K_5$ has K_5 as its underlying graph and all edges are labeled with -1 .) We will discuss some of these places, their known results, and conjectures. (Received January 27, 2010)