

1058-05-151

Ortrud R. Oellermann* (o.oellermann@uwinnipeg.ca), Department of Maths and Stats,
University of Winnipeg, 515 Portage Avenue, Winnipeg, Manitoba R3B 2E9, Canada. *Graph
Classes Determined by Convexity Notions in Graphs.*

Let V be a finite set and \mathcal{M} a collection of subsets of V . Then \mathcal{M} is an alignment of V if \mathcal{M} is closed under taking intersections and contains both V and the empty set. In this case the elements of \mathcal{M} are called convex sets. If $S \subseteq V$, then the convex hull of S is the smallest convex set that contains S . Suppose $X \in \mathcal{M}$. Then $x \in X$ is an extreme point for X if $X \setminus \{x\} \notin \mathcal{M}$. A convex geometry on a finite set is an alignment with the additional property that every convex set is the convex hull of its extreme points. We survey characterizations of graph classes that are defined in terms of convexities on the vertex set of a graph. (Received February 12, 2010)