1075-14-55 **Corey F Irving*** (cirving@math.tamu.edu). *Wachspress Varieties.*

We examine the algebraic geometry of Wachspress barycentric coordinates for polygons in the plane. These are functions on the polygon, one for each vertex, that express the point as a convex combination of the vertices. Wachspress's coordinates are rational barycentric coordinates of minimal degree. The algebraic relations among these Wachspress coordinates are discussed, which amounts to describing the (Wachspress) variety in $\mathbb{P}^{n-1}$ parametrized by these coordinates for an n-gon. (Received August 18, 2011)