1074-14-143 **Mike Janssen*** (s-mjansse7@math.unl.edu), Department of Mathematics, University of Nebraska, Lincoln, NE 68588-0130. *Containment Problem for Points on a Reducible Conic in* $\mathbb{P}^2$.

In recent years, much work has been done on the question of comparing symbolic and ordinary powers of an ideal I in a Noetherian ring. In particular, several authors have asked: for which m and r is the symbolic power $I^{(m)}$ contained in the ordinary power I^r? Recent results of Ein, Lazarsfeld, and Smith; Hochster and Huneke; Bocci and Harbourne; and Harbourne and Huneke, address various aspects of this problem. Our results, like those of Bocci and Harbourne, answer the containment question in a geometric setting, where the ideal I is in a polynomial ring over a field. Specifically, we examine the case in which I defines $n+1$ points in $\mathbb{P}^2$, where n points lie on a line L and the remaining point does not lie on L. (Received August 18, 2011)