1035-Z1-281   **Steven Schlicker***, Department of Mathematics, 1 Campus Drive, Allendale, MI 49401-9403.
Numbers Simultaneously Polygonal and Centered Polygonal.

Recently, while teaching a course in number theory for practicing secondary mathematics teachers, I introduced the topic of polygonal numbers and centered polygonal numbers. While doing so a question came to mind: which numbers are both k-polygonal and k-centered polygonal? To my surprise, I could not find the answer to this question anywhere. In this session I will present a complete classification of the numbers that are simultaneously k-polygonal and k-centered polygonal and, as a consequence, share an infinite family of previously unknown integer sequences. (Received August 29, 2007)