

1056-05-1775

Desiree Masters* (masters.tdm@gmail.com), **Ryan Bunge**, **Saad El-Zanati**, **Theresa Kamykowski** and **Isai Almeida-Arrieta**. *On Cyclic Cycle Plus a Chord Designs.*

Let G be the graph consisting of a cycle of length $n - 1$ plus a chord e . We investigate necessary and sufficient conditions for the existence of cyclic G -decompositions of the 2-fold complete multigraph ${}^2K_{nx+1}$ for every positive integer x . These results were obtained at an REU Site for Pre-service and In-service Secondary Mathematics Teachers at Illinois State University. (Received September 22, 2009)