1077-00-2221 **Jasper O Weinrich-Burd*** (jb9566@bard.edu), NY. *Adinkra Phase Graphs.*

Adinkra Graphs arise in the study of supersymmetry in physics. These graphs all have a base cube structure at their heart, with certain extra edges allowed according to rules derived from physics. Typically, Adinkra graphs are signed graphs, with values ± 1 assigned to each edge. We will explore Adinkra graphs with edge assignments drawing from the complex unit circle. We extend the standard notion of equivalent edge assignments from the real case to our complex Adinkra phase graphs. Finally, we prove that there are the same number of equivalence classes of complex edge assignments as there are of real edge assignments. (Received September 21, 2011)