

1124-20-160

Amrita Acharyya, Jon M Corson and Bikash C Das* (bikash.das@ung.edu), University of North Georgia, 3820 Mundy Mill Rd., OAKWOOD, GA. *Cofinite Connectedness and Cofinite Group Actions.*

We have defined and established a theory of cofinite connectedness of a cofinite graph. Many of the properties of connectedness of topological spaces have analogs for cofinite connectedness. We have seen that if G is a cofinite group and $\Gamma = \Gamma(G, X)$ is the Cayley graph. Then Γ can be given a suitable cofinite uniform topological structure so that X generates G , topologically iff Γ is cofinitely connected.

Our immediate next concern is developing group actions on cofinite graphs. Defining the action of an abstract group over a cofinite graph in the most natural way we are able to characterize a unique way of uniformizing an abstract group with a cofinite structure, obtained from the cofinite structure of the graph in the underlying action, so that the afore said action becomes uniformly continuous. (Received September 06, 2016)