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Action of cofinite groups on cofinite graphs.

Our idea of cofinite graph is motivated by cofinite groups due to B. Hartley. In this work, we define cofinite connectedness of a cofinite graph. Many of the properties of connectedness of topological spaces are analogous to cofinite connectedness. We define Group Actions on a cofinite graph to characterize a unique way of uniformly topologizing an abstract group with profinite topology, induced by the cofinite graph, so that the aforesaid action becomes uniformly equicontinuous. Example of such actions via the group of integers and its profinite completion is given. (Received August 17, 2020)