

1145-11-687

Darren B Glass* (dglass@gettysburg.edu), 300 N Washington Street, Gettysburg, PA 17325.

Arithmetical Structures on Graphs.

Given a finite connected simple graph, we define an arithmetical structure on the graph to be a labelling of the vertices with positive integers so that the label of each vertex is a divisor of the sum of the labels of its neighbors. Lorenzini showed that any graph has a finite number of arithmetical structures but his proof did not give insight into the actual number of structures. In this talk, we discuss results with various coauthors that make this number explicit for certain families of graphs. (Received September 12, 2018)