

My Favorite Graph Labellings

Lowell Beineke¹

¹) Department of Mathematical Sciences
Purdue University Fort Wayne
Fort Wayne, IN 46805, USA
beineke@pfw.edu

The labellings that we will consider are two of the most natural types, those in which the vertices of a graph have labels from a given set and each edge is assigned the value of the sum or the product of the labels of its two vertices. In the case of the product, we investigate strongly multiplicative labellings, those in which the n vertices of the graph are labelled $1, 2, \dots, n$, and the product labels on the edges are all different. In the case of the sum, we study those graphs (called sum graphs) that have a labelling in which the sum label on each edge is the label of some vertex in the graph.