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**John Georges, David Mauro and Yan Wang\***, Box 150971, Millsaps College, 1701 N State St, Jackson, MS 39210-0001. *Some results on  $\lambda_x$ -invertible graphs.*

The recent work of Griggs and Jin on distance-constrained graph labelings has prompted the consideration of real number labelings. For graph  $G$  and non-negative real number  $x$ , an  $L_x$ -labeling of  $G$  satisfies the conditions that labels of adjacent vertices differ by at least  $x$  and labels of vertices distance two apart differ by at least one; for fixed value of  $x$ , the minimum span of all  $L_x$ -labelings of  $G$  is denoted  $\lambda_x(G)$ . In this paper we introduce the notion of  $\lambda_x$ -invertible graphs: for  $x > 0$ ,  $G$  is said to be  $\lambda_x$ -invertible if and only if  $\lambda_x(G) = x\lambda_{1/x}(G^c)$ . We investigate the properties of  $\lambda_x$ -invertible graphs and identify several classes of graphs with  $\lambda_x$ -invertibility including Kneser graphs, the line graphs of complete multipartite graphs, and a subfamily of self-complementary graphs. (Received September 01, 2008)