1056-05-2083   **Jonathan Darren Hulgan*** (`jhulgan@memphis.edu`), Department of Mathematical Sciences, The University of Memphis, Memphis, TN 38152, and **Jeno Lehel**, **Kenta Ozeki** and **Kiyoshi Yoshimoto**. *Vertex coloring of graphs by total 2-weightings.*

An assignment of real weights to the edges and the vertices of a graph is a vertex-coloring total weighting if the total weight sums at the vertices are distinct for any two adjacent vertices. Of interest in this paper is the existence of vertex-coloring total weightings with weight set of cardinality two, a problem motivated by the conjecture that every graph has a such a weighting using the weights 1 and 2. Here we prove the existence of such weightings for certain families of graphs using any two distinct non-negative real weights. (Received September 23, 2009)