1023-05-1206 Ping Zhang and Futaba Okamoto* (futaba.okamoto@wmich.edu), Department of Mathematics, Western Michigan University, Kalamazoo, MI 49008, and Mary Radcliffe. From a Banquet Seating Problem to a Graph Coloring Problem.

We describe a problem that involves seating students around a circular banquet table. This problem is shown to have a connection with a basic problem in graph theory that concerns finding means to distinguish the vertices of a connected graph. In the past 35 years, this problem has received increased attention. With the aid of a graph coloring called an irregular coloring, we introduce a new method of distinguishing the vertices of a graph and this method combines a number of the features described in the literature. (Received September 25, 2006)