

1044-05-143

Robert B. Gardner* (gardnerr@etsu.edu), East Tennessee State University, Department of Mathematics, Box 70663, Johnson City, TN 37614. *Triple Systems from Graph Decompositions.*

It is well known that a Steiner triple system of order v is equivalent to a 3-cycle decomposition of the complete graph on v vertices. Decompositions of complete directed graphs yield various other triple systems: directed, Mendelsohn, hybrid, and oriented triple systems. Taking as the definition of “triple system” the very general idea of a decomposition of a complete graph (or directed graph or mixed graph) into graphs on three vertices, a survey of results is presented. In addition to well known systems, a number of other triple systems will be defined, including some for which existence conditions are not yet known. (Received August 29, 2008)