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***A uniqueness result for 3-homogeneous latin trades***

Comment.Math.Univ.Carolin. 47,2 (2006) 337-358.

**Abstract:** A latin trade is a subset of a latin square which may be replaced with a disjoint mate to obtain a new latin square. A  $k$ -homogeneous latin trade is one which intersects each row, each column and each entry of the latin square either 0 or  $k$  times. In this paper, we show that a construction given by Cavenagh, Donovan and Drápal for 3-homogeneous latin trades in fact classifies every minimal 3-homogeneous latin trade. We in turn classify all 3-homogeneous latin trades. A corollary is that any 3-homogeneous latin trade may be partitioned into three, disjoint, partial transversals.

**Keywords:** latin square, latin trade, critical set

**AMS Subject Classification:** 05B15