ICM 1998, Berlin, Aug. 18–27

Abstracts of Short Communications and Posters

Section:

13. Combinatorics

1991 MS Classification: 5, 5c, 20

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Classification of Cayleys graphs of order 12

A way of generating Cayleys graphs from subsets of a group is presented in the Poster using graphs superposition. Using the automorphism group of the generating group, it is shown that some isomorphisms between graphs can be predicted. From the five groups of order twelve, 896 graphs were generated, and reduced by isomorphisms to 72, from which half of them are the complements of the other half. Most of this graphs belong to known families, but it was necessary to define some other general families to classify some of the graphs. These "new" families are presented on the Poster with their description even though not all their properties have yet been found.