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A census of 4-valent half-arc-transitive graphs and arc-transitive digraphs of valence two

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Abstract: A complete list of all connected arc-transitive asymmetric digraphs of in-valence and out-valence 2 on up to 1000 vertices is presented. As a byproduct, a complete list of all connected 4-valent graphs admitting a half-arc-transitive group of automorphisms on up to 1000 vertices is obtained. Several graph-theoretical properties of the elements of our census are calculated and discussed.

Keywords: Graph, digraph, edge-transitive, vertex-transitive, arc-transitive, half-arc-transitive.

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Cenzus 4-valentnih pol-ločno-tranzitivnih grafov in ločno-tranzitivnih digrafov valence dve

Povzetek: Predstavimo popoln seznam vseh povezanih ločno-tranzitivnih asimetričnih digrafov vhodne in izhodne valence 2 z do 1000 vozlišči. Kot stranski produkt dobimo popoln seznam vseh povezanih 4-valentnih grafov z do 1000 vozlišči, ki dopuščajo pol-ločno-tranzitivno grupo avtomorfizmov. Izračunani in obravnavani so različni parametri elementov našega cenzusa.

Ključne besede: Graf, digraf, povezavno-tranzitiven, vozliščno-tranzitiven, ločno-tranzitiven, pol-ločno-tranzitiven.