

On the upper embedding of Steiner triple systems and Latin squares*

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Abstract

It is proved that for any prescribed orientation of the triples of either a Steiner triple system or a Latin square of odd order, there exists an embedding in an orientable surface with the triples forming triangular faces and one extra large face.

Keywords: Upper embedding, Steiner triple system, Latin square.

Math. Subj. Class.: 05B07, 05B15, 05C10

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O zgornjih vložitvah sistemov Steinerjevih trojk in latinskih kvadratov*

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Povzetek

V članku dokažemo, da za vsako predpisano orientacijo trojk bodisi Steinerjevega sistema trojk bodisi latinskega kvadrata lihega reda obstaja vložitev le-tega na orientabilno ploskev, pri kateri trojke oblikujejo trikotna lica ter še eno zelo veliko lice.

Ključne besede: Zgornja vložitev, Steinerjev sistem trojk, latinski kvadrat.

Math. Subj. Class.: 05B07, 05B15, 05C10

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