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Unembeddable nets of small deficiency

The famous Bruck-Bose embedding theorem for nets [or families of mols] and partial geometries asserts that, in particular, a net of order n with small deficiency is embeddable in an affine plane of order n . As a counterpoint we present here a simple construction for a family of nets of order n degree k which are unembeddable and have the smallest known deficiency, i.e. the largest known value of k . The construction uses a classical geometrical result which is ascribed to Gallucci but which, strictly speaking, goes back to Pappus of Alexandria.