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A note on Finite Hyperbolic Planes Obtained from Projektive Planes

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Abstract: Let Π be a finite projective plane of order n and \mathcal{L} be a set, $|\mathcal{L}| = m$, of any lines of Π which contains three non-concurrent lines. Consider the hyperbolic plane Π_m obtained from Π by removing all lines (including all points on them) of \mathcal{L} . In this paper, we obtain larger values than the known maximum value of m and determine the line classes of some hyperbolic planes of type Π_m . Furthermore we give an answer to a question in Bumcrot [1] about hyperbolic planes containing two-point lines.

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