

REGULAR PARTIAL LINEAR SPACES ADMITTING IDENTIFYING CODES

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A characterization of k -regular partial linear spaces admitting a $(1, \leq k)$ -identifying code is given. As the incidence graph of a k -regular partial linear space is a k -regular bipartite graph of girth at least six, we derive a characterization of such a graphs admitting a $(1, \leq k)$ -identifying code. We describe a family of k -regular partial linear spaces on $2(k - 1)^2 + k$ points and $2(k - 1)^2 + k$ lines which do not admit a $(1, \leq k)$ -identifying code; and finally it is shown that the smallest $(k; 6)$ -graphs (known up to now), where $k - 1$ is not a prime power, admit a $(1, \leq k)$ -identifying code.