

# On resolving sets in the point-line incidence graph of $PG(n, q)$

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## Abstract

Lower and upper bounds on the size of resolving sets and semi-resolving sets for the point-line incidence graph of the finite projective space  $PG(n, q)$  are presented. It is proved that if  $n > 2$  is fixed, then the metric dimension of the graph is asymptotically  $2q^{n-1}$ .

*Keywords:* Point-line incidence graph, resolving sets, finite projective spaces.

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# O resolenčnih množicah v incidenčnem grafu točk in premic v $PG(n, q)$

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## Povzetek

Obravnavamo spodnje in zgornje meje moči resolenčnih in semiresolenčnih množic incidenčnega grafa točk in premic kočnega projektivnega prostora  $PG(n, q)$ . Dokažemo, da je za izbrani  $n > 2$  metrična razsežnost grafa asimptotično enaka  $2q^{n-1}$ .

*Ključne besede: Incidenčni graf točk in premic, resolenčna množica, končni projektivni prostor.*

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