

## LOCALLY SOLVABLE AND SOLVABLE-BY-FINITE MAXIMAL SUBGROUPS OF $GL_n(D)$

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**Abstract:** This paper aims to study solvable-by-finite and locally solvable maximal subgroups of an almost subnormal subgroup of the general skew linear group  $GL_n(D)$  over a division ring  $D$ . It turns out that in the case where  $D$  is non-commutative, if such maximal subgroups exist, then either it is abelian or  $[D : F] < \infty$ . Also, if  $F$  is an infinite field and  $n \geq 5$ , then every locally solvable maximal subgroup of a normal subgroup of  $GL_n(F)$  is abelian.

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**Key words:** division ring, maximal subgroup, locally solvable group, polycyclic-by-finite group.