

COMPUTATIONAL COMPLEXITY OF THE INEQUALITY  
PROBLEM FOR ONE CLASS OF SEMIGROUPS

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*Abstract*

It is proved that the algorithmic inequality problem for the class  $\mathcal{K}$  of partially ordered semigroups  $\mathbf{S}$  with a finite number of defining inequalities is decidable with the space  $c^n$ , where  $c = \text{const}$  for  $\mathbf{S}$ .

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