

Meet-irreducibility of congruence lattices of prime-cycled algebras

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Abstract

The set of all congruences on an algebra (A, F) forms a lattice $\text{Con}(A, F)$. Similarly, the set of all congruence lattices of all algebras defined on a fixed base set A forms a lattice. The aim of this talk is to explore some of the meet-irreducible elements of the lattice of congruence lattices of all algebras defined on a finite set A . It is known that all these meet-irreducible elements are congruence lattices of monounary algebras, which can be visualized as planar graphs. Using this visualization, we study the meet-irreducible elements, specifically in the case when each cycle of (A, F) contains a prime number of elements, i.e. we focus on prime-cycled algebras.