

# Congruence-preserving functions and affine completeness

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Congruence-preserving (also called compatible) operations on a given algebra  $A$  form a clone which contains the clone of all polynomial operations. The algebra  $A$  is called affine complete if these two clones coincide. Compatible operations and affine completeness have been investigated for many types of algebras. Typical problems include:

- Determine if an algebra  $A$  is affine complete.
- Find the generators of the clone of all compatible operations on an algebra  $A$ .
- Construct an affine completion for algebras that are not affine complete.
- Describe the interval in the lattice of clones on  $A$  between the clones of polynomial and compatible operations.

We present an overview of results on the above problems for distributive lattices (bounded and unbounded), distributive lattices with additional operations, median algebras and rings of integers modulo  $n$ .