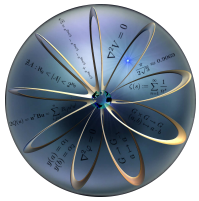

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complete lattice homomorphism

Canonical name	CompleteLatticeHomomorphism
Date of creation	2013-03-22 16:58:02
Last modified on	2013-03-22 16:58:02
Owner	porton (9363)
Last modified by	porton (9363)
Numerical id	6
Author	porton (9363)
Entry type	Definition
Classification	msc 06B23
Related topic	CompleteLattice

Complete lattice homomorphism is a function from one lattice to an other lattice, which preserves arbitrary (not only finite) meets and joins.

If $\phi : L \to M$ is lattice homomorphism between complete lattices L and M such that

- $\phi(\bigvee\{a_i \mid i \in I\}) = \bigvee\{\phi(a_i) \mid i \in I\}$, and
- $\phi(\bigwedge\{a_i \mid i \in I\}) = \bigwedge\{\phi(a_i) \mid i \in I\}$,

then ϕ is called a *complete lattice homomorphism*.

Most often are considered *complete lattice homomorphisms* from one complete lattice to an other complete lattice (that is when all meets and joins are defined).

Complete lattice homomorphism is a special case of lattice homomorphism.