

# Complete distributive lattices [edit](#)

**Abbreviation:** CDLat

**Definition 1.** A *complete distributive lattice* is a complete lattice  $\mathbf{A} = \langle A, \vee, \wedge \rangle$  such that

$$\vee \text{ distributes over } \wedge: x \vee (y \wedge z) = (x \vee y) \wedge (x \vee z)$$

Remark: Click on the 'Edit text of this page' link at the bottom to add some information about complete distributive lattices

It is not unusual to give several (equivalent) definitions. Ideally, one of the definitions would give an irredundant axiomatization that does not refer to other classes.

**Morphisms.** Let  $\mathbf{A}$  and  $\mathbf{B}$  be ... . A morphism from  $\mathbf{A}$  to  $\mathbf{B}$  is a function  $h : A \rightarrow B$  that is a homomorphism:  $h(x \dots y) = h(x) \dots h(y)$

**Definition 2.** An ... is a structure  $\mathbf{A} = \langle A, \dots \rangle$  of type  $\langle \dots \rangle$  such that

... is ...: *axiom*

... is ...: *axiom*

**Basic Results.**

**Examples.**

1.

**Properties.** (description)

Feel free to add or delete properties from this list. The list below may contain properties that are not relevant to the class that is being described.

Classtype	second-order
Locally finite	
Residual size	
Congruence distributive	
Congruence modular	
Congruence $n$ -permutable	
Congruence regular	
Congruence uniform	
Congruence extension property	
Definable principal congruences	
Equationally def. pr. cong.	
Amalgamation property	
Strong amalgamation property	
Epimorphisms are surjective	

**Finite Members.** Same as for distributive lattices

**Subclasses.**

... subvariety

... expansion

**Superclasses.**

... supervariety

... subreduct

REFERENCES