

Chains [edit](#)

Definition 1. A *chain* is a partially ordered set $\mathbf{C} = \langle C, \leq \rangle$ such that

\leq is a total order: $x \leq y$ or $y \leq x$

Remark:

Morphisms. Let \mathbf{C} and \mathbf{D} be chains. A morphism from \mathbf{C} to \mathbf{D} is a function $h : C \rightarrow D$ that is a orderpreserving:

$$x \leq y \implies h(x) \leq h(y)$$

Basic Results.

Examples.

1.

Properties. (description)

Classtype	Universal
Quasiequational theory	
First-order theory	
Amalgamation property	
Strong amalgamation property	
Epimorphisms are surjective	

Finite Members. $f(n)$ = number of members of size n .

$$f(1) = 1$$

$$f(2) = 1$$

$$f(3) = 1$$

$$f(4) = 1$$

$$f(5) = 1$$

$$f(6) = 1$$

Subclasses.

Well-ordered chains

Dense linear orders

Superclasses.

Trees

REFERENCES

[1]