1 Cartesian Closed Categories

Cartesian Closed Categories - Finite exponentials and finite products.

Exponential object - Functors from $\mathcal{A}$ to $\mathcal{B}$ $\mathcal{B}^{\mathcal{A}} F : \mathcal{A} \to \mathcal{B}$

In the category of posets, which are Transitive and anti-symmetric, the objects are just sets X and the morphisms are defined as

meaning that if there is a morphism between two objects, there is only one.