Exercise 7. Show that the restriction of an order relation is an order relation

Proof.

Let A be a set, C an order relation on A and A_0 a subset of A. The comparability, non-reflexivity and transitivity of C on A_0 can be deduced by taking elements $x, y, z \in A_0$, and applying the comparability, non-reflexivity, and transitivity of C on A since x, y, z are also elements of A.

□