**Homework**

1. Show that (𝐴∪𝐶)∩(𝐵∪𝐶)⊆(𝐴∩𝐵)∪𝐶

2. Write each of the followings explicitly

a).

b).

1. Let . Show that the following relation is an equivalence relation on : if and only if .
2. Let and be any two partial orders on the same set . Show that is a partial order.
3. Show that any function from a finite set to itself contains a cycle.