Proof For Feedback for Apr 21

Math 2001, Spring 2023. Katherine E. Stange.

Theorem 1. *Let S and T be equivalence relations on a set A. Show that $S \cap T$ (the intersection) is also an equivalence relation on A.*

Hint: We mentioned this in class when we were reviewing right before the relations test. Recall that an equivalence relation is a set of ordered pairs. You must show reflexivity, symmetry and transitivity. If you're having trouble starting, (1) try small examples; and (2) try explaining why it is true out loud. One usually can't write a good proof until one has understood why something is true in an intuitive way.