

$$(x, y) \in \bigcap S \wedge (y, z) \in \bigcap S \rightarrow (x, y) \in r_1, r_2 \text{ and } (y, z) \in r_1, r_2 \text{ transitive} \rightarrow (x, z) \in r_1, r_2 \rightarrow (x,$$