What Homework 1, Problem 3 Asks
Problem Statement

• Justify the statement: “Suppose two subjects $s_1$ and $s_2$ are created and the rights in $A[s_1, o_1]$ and $A[s_2, o_2]$ are tested. The same test for $A[s_1, o_1]$ and $A[s_1, o_2] = A[s_1, o_2] \cup A[s_2, o_2]$ will produce the same result.”

• Would it be true if one could test for the absence of rights as well as for the presence of rights?
2 create subjects

create subject $s_1$
create subject $s_2$
enter $r$ into $A[s_2, o_2]$
if $r$ in $A[s_2, o_2]$
then
...[[IMPORTANT: these would be in commands]]
create subject

create subject $s_1$
enter $r$ into $A[s_1, o_2]$
if $r$ in $A[s_1, o_2]$
then

...[[IMPORTANT: these would be in commands]]

Problem: prove the result of executing the two command sequences produces the same result
Test for Absence of Rights

• Current access control matrix model allows conditional tests of the form if \( r \) in \( A[s,o] \) but not if \( r \) not in \( A[s,o] \)

• The problem asks, what if both are allowed? Would the two command sequences still produce the same results?