

Expanded Hint For Assignment #3, Problem 5.

Don't! #1. use Leib!! Leib is NOT applicable AND irrelevant!

Consider: WHY should I even USE (Boolean) Leib in a *Hilbert proof in Predicate Logic* when I can use Post?!

Whatever you do,

Don't! #2. confuse “ \equiv ” with “ $=$ ”! Explosive mix for grades (the explosion leaves a “0”)!

Don't! #3. use the Deduction theorem! NOT needed and hinders rather than helps!

Don't! #4. do an equational proof!

Do instead (a) FOLLOW the Hint given in the problem.

Do instead (b) Use Hilbert style proof.

Do instead (c) Start your proof with the **axiom 6**, $t = s \rightarrow (A[w := t] \equiv A[w := s])$, in the form $x = y \rightarrow (x = z \equiv y = z)$, that is, taking “ $w = z$ ” for “ A ”, “ x ” for “ t ” and “ y ” for “ s ”.