

Induction Problem 3

Fill in the following blanks to give a proof by induction for the following claim. You may want to check in with a TA/LA/instructor about your answer to each piece before moving on to the next one.

Claim: All rooted binary trees have one more leaf than internal nodes with exactly two children.

Proof:

Universal declaration:

Inductive hypothesis:

There are two cases:

Base case:

Inductive case:

Wrap-up statement: