

## Proof Logic Basics - 1

Accepted

Not Accepted

I affirm this work abides by the university's Academic Honesty Policy.

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Print Name, then Sign

- First due date **Thursday, January 28**.
- Turn in your work on a separate sheet of paper with this page stapled in front.
- Do not include scratch work in your submission.
- There is to be **no collaboration** on any aspect of developing and presenting your proof. Your only resources are: you, the course textbook, me, and pertinent discussions that occur **during class**.
- Follow the Writing Guidelines of the Grading Rubric in the course information sheet.
- Retry: Only use material from the relevant section of the text or earlier.
- Retry: Start over using a new sheet of paper.
- Retry: Restaple with new attempts first and this page on top.

*“We used to think that if we knew one, we knew two, because one and one are two. We are finding that we must learn a great deal more about ‘and.’”* (Sir Arthur Eddington)

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LB-1 (Flug Handout):

1. Verify the validity of the method of proof by contradiction by presenting the truth table that shows  $((H \wedge \sim C) \implies (R \wedge \sim R)) \iff (H \implies C)$  is a tautology.
  2. Theorem 4 of the Scorpling Flug Handout says: “There cannot be two or more pushy flugs.”
    - (a) Rephrase Theorem 4 to an equivalent theorem in “**If**  $\dots$ , **Then**  $\dots$ ” form.
    - (b) Prove your rephrased theorem.
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