Introductory Logic: Worksheet 4

October 22, 2025

1   Problem 1

Give an example of why propositional logic falls short.

2   Problem 2

Translate the following sentences into predicate logic:

1. Every logic student is a student.

2. There is someone to the left of John.

3. There is no one such that they are shorter than John.

4. Some rectangles are not squares.

5. No triangles are squares.

3   Problem 3

Prove the following:
$\forall x(Gx \rightarrow Fx) \vdash \neg Fa \rightarrow \neg Ga.$