

Exercises for the 'Incompleteness-Part' of L&C

Exercise I1:

Prove Theorem GI (on slide 14).

Exercise I2:

Provide an example of an expressible, but not representable set.

Hint: Think of the set we used in the proof of Theorem GT.

Exercise I3:

A program π is called correct with respect to precondition A and postcondition B if the following holds: when π starts in a state where A is true then π terminates in a state where B is true.

What follows from the incompleteness theorems about the provability of partial correctness assertions? What if A , B , and/or π are trivial? Provide concrete examples and explain!

Submission of solutions to these exercises:

- Send as PDF to chrisf@logic.at until January 6, 2015 (Epiphany)
- Use subject line: "LC-exercises Incompleteness"
- Include your name and Matrikelnummer in the PDF