

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

Exercise I1 (compulsory!):

Prove Theorem GI (on slide 14).

Exercise I2 (compulsory only if you aim at a top grade):

Let $R = \{\ulcorner S \urcorner \mid S \in \mathcal{R}\}$. Show that if Σ is consistent and R^* is representable (not just expressible!) then Σ is Gödel-incomplete.

Exercise I3 (voluntary, but simple and highly recommended):

Show that \overline{P}^* is not representable in any system Σ .

Submission of solutions to these exercises:

- **Deadline:** January 6, 2014 (Epiphany)
- Send as **PDF** to chrisf@logic.at
- Use **subject line:** "LC-exercises Incompleteness"
- Include your **name** and **Matrikelnummer** in the PDF
- resend/inquire, if you don't receive an acknowledgment within 3 days