

MATH 161—WRITING ASSIGNMENT 08

Due: Sunday October 28—5:00PM

Getting Started

1. Get the template for this assignment. Here's how to do it:

- Go to <https://v2.overleaf.com/> (formerly: <https://www.sharelatex.com>), and **make sure you are logged in**.
- In a new window, go here:

<https://v2.overleaf.com/read/wbtsxvmnyvfd>

- Click on the menu icon in the upper-left and select “Copy Project”
- When ask for a name, choose something like “Math 161 - WA 08” and click “Copy”
- When this completes you will be back in your own workspace (instead of mine).
- After solving the problem(s), type them up using the template.
- Email me your final draft.

2. Let me know if you have any questions!

1. Let \mathcal{L} be any language, and let η be any \mathcal{L} -sentence. Prove that $\Sigma \vdash \eta$ if and only if $\Sigma \cup \{\neg\eta\} \vdash \perp$, where $\perp := [(\forall x)x = x] \wedge \neg[(\forall x)x = x]$.

Note: this is Problem 2.7.1 #4. You can use the hint in the back of the book but take care not to plagiarize it. You will see in the template that I got you started, but please feel free to write it up differently.