

May 8, 2024
Cedars Math
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Homework: Using LaTeX

(1) Go to the LaTeX compiler site, <https://latex.informatik.uni-halle.de/latex-online/latex.php>. It is in Germany, but I think you have a choice of English instructions or German instructions.¹ This is a site like CodaBrainy for Python, except it is for LaTeX. What LaTeX does is to help you write equations that look beautiful. It is a “typesetting language”, because it takes your words and symbols and arranges them on the page like a book designer would do.

(2) Cut and paste this code into the big white box below “Please enter the source code in this window:”

```
\documentclass[12pt,reqno,twoside,usenames,dvipsnames]{amsart}

\usepackage{graphicx}
\usepackage{hyperref}
\usepackage{verbatim}

\hypersetup{breaklinks=true,pagecolor=white,colorlinks=true,linkcolor= blue,hy
\urlstyle{rm}}

\parindent 24pt
\parskip 10pt

\begin{document}
Hello world.
```

¹LaTeX and Python are the same all around the world, always using commands like `begin document` or “do for item in (0,10): ” that come from English words.

Here, paste your code in big box under

Bitte in diesem Fenster den Quellcode eingeben:

Then to run it, click the button labelled with the German word for translate, Ubersetzen

Then go to the bottom and see if it produced a pdf file. If it did, it worked, and you can see the output by clicking on: in neuem Fenster

Here is a second paragraph. Here is `\href{https://latex.informatik.uni-halle.de/latex-online/latex.php}`{text that when clicked will take you to the Latex site}.

`\end{document}`

(3) Run your code by clicking on the button that says “Translate”. Then go down to the bottom of the page, where it says, “Output in PDF format in new window”, and click on In New window. A new tab or window should appear that shows the output. Take a screenshot of that to send me by email or to print and hand in

(4) Now cut and paste this code into the middle of your Hello world code, replacing everything between begin-document and end-document, and again run it by clicking Translate and send me the output in “a new tab”.

`\begin{document}`

`\color{blue}`

`\begin{Huge}`

`\hspace{64pt}Greek and Hebrew letters: α , β , θ .`

`\end{Huge}`

`\vspace{24pt }`

`\color{black}`

`\hspace{72pt}Hats, etc., on letters: \hat{x} , \check{a} , \overline{b} , \tilde{d}`

`\end{document}`

(5) Now cut and paste this code into the middle of your Hello world code, replacing everything between begin-document and end-document, and again run it by clicking Translate and send me the output in “a new tab”.

```

\begin{document}

\color{red}
\begin{large}
\hspace{72pt}Fancy fractions:  $y = \frac{5 + \frac{12}{10}}{100 - \sqrt{7}}$ 
\end{large}

Symbols:  $\checkmark$   $\forall y$   $\exists y'$   $\approx$   $\pi$   $+$   $\infty$   $\geq$  17  $\rightarrow$   $x$   $\rightarrow$  (5  $\times$ 

\noindent
Equations:\\
\begin{equation} \label{equation_1}
Area =  $\pi r^2$ 
\end{equation}
Also,
\begin{equation} \label{equation_2}
y = -5 + 12 \cdot \left( \frac{2x}{5} \right)
\end{equation}

Equation (\ref{equation\_1}) tells the area of a circle. Equation (\ref{equa

\end{document}

```