

Using LaTeX via Python

LaTeX is the computer language scientists, mathematicians, and economists use for writing equations. Publishers also use it for formatting books and articles, even if they don't contain any equations. LaTeX is very powerful and very easy to use. You can actually run LaTeX inside of Python. Since you know how to use Python, this will be the easiest way for you. Look at the following commands:

```
import matplotlib.pyplot as plt
plt.title(r"$10^{-1} = \frac{1}{10^1} = 1/10$. Also, $ 10^2 \cdot 10^3 = 10^5 = 100,000$. And $\sqrt{9} = 3$.")
plt.axis('off')
plt.show()
```

$$10^{-1} = \frac{1}{10^1} = 1/10. \text{ Also, } 10^2 \cdot 10^3 = 10^5 = 100,000. \text{ And } \sqrt{9} = 3.$$

For the rest of these, all I'll write is the `plt.title()` command.

```
plt.title(r"Greek and Hebrew letters: $\alpha, \beta, \theta, \aleph, \beth, \gimel$.",
color="blue", fontsize = 20)
```

Greek and Hebrew letters: $\alpha, \beta, \theta, \aleph, \beth, \gimel$.

```
plt.title(r"Hats, etc., on letters: $\hat{x}, \check{a}, \overline{b}, \tilde{d}, \dot{e}, y_{it}$.")
```

Hats, etc., on letters: $\hat{x}, \check{a}, \overline{b}, \tilde{d}, \dot{e}, y_{it}$.

```
plt.title(r"Fancy fractions: $y = \frac{5 + \frac{12}{10}}{100 - \sqrt{7}}$, color="red", fontsize = 14 )
```

Fancy fractions: $y = \frac{5 + \frac{12}{10}}{100 - \sqrt{7}}$

```
plt.title(r"Symbols: $\checkmark \quad \forall y \quad \exists y' \approx \pi + \infty \geq 17 \rightarrow x \Rightarrow (5 \times 234) \div x \neq Z$")
```

Symbols: $\checkmark \quad \forall y \quad \exists y' \approx \pi + \infty \geq 17 \rightarrow x \Rightarrow (5 \times 234) \div x \neq Z$.

Two other ways to do LaTeX:

1. Go to https://www.tutorialspoint.com/online_latex_editor.php and paste in your code. This is like Codabrainy is for Python, a way to go online and use somebody else's remote computer to process your input file.
2. Install MikTeX from <https://miktex.org/download>. This is a free version of LaTeX and is what I use myself. You need to install it on your computer, which is surprisingly easy.