

Why use TeXmacs?

1. TeXmacs versus LaTeX

- I already know LaTeX, and I do not want to change.

Great! Do not read any further, you probably clicked this link in error.

- I like LaTeX, why should I bother learning another system?

LaTeX is an excellent typesetting system, but can you:

- include computations in your document?

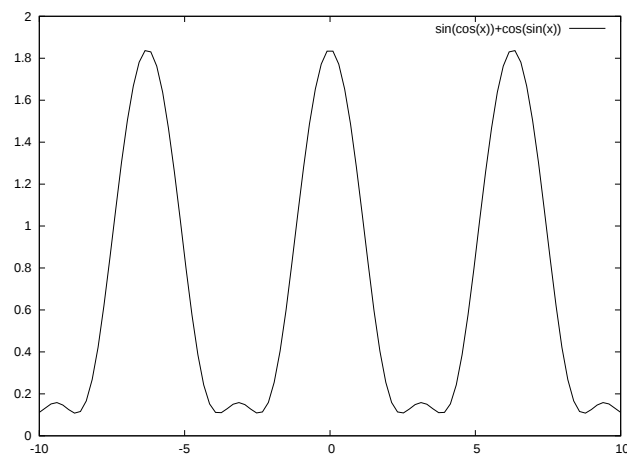
Mathematica

```
In[2]:= Integrate[Sin[x] Exp[-x^2],x]
```

$$\frac{\sqrt{\pi} \left(\operatorname{erfi}\left(\frac{1}{2} - ix\right) + \operatorname{erfi}\left(\frac{1}{2} + ix\right) \right)}{4\sqrt{e}}$$

- include plots in your document?

```
GNUplot] plot sin(cos(x))+cos(sin(x))
```



```
GNUplot]
```

- readily interpret the following?

$$a_n = \frac{1}{\pi} \int_{-\pi}^{\pi} f(x) \cos nx \, dx, \\ \text{\texttt{\textbackslashmathrm{d}x}} = \\ \frac{1}{\pi} \int_{-\pi}^{\pi} x^2 \cos nx \, dx, \text{\texttt{\textbackslashmathrm{d}x}}$$

or would you have preferred to see:

$$a_n = \frac{1}{\pi} \int_{-\pi}^{\pi} f(x) \cos nx \, dx = \frac{1}{\pi} \int_{-\pi}^{\pi} x^2 \cos nx \, dx ?$$

- attach to a displayed figure the code that generates the image?

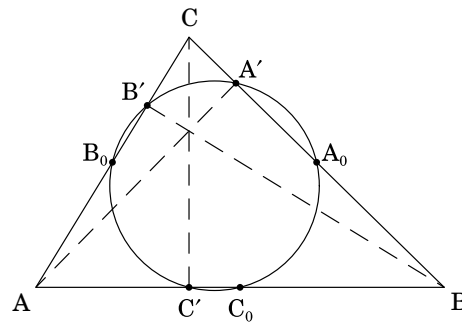


Figure 1. Euclidean geometry problem rendered in Eukleides

- I already have documents in LaTeX.
Import them into TeXmacs through the Latex input filter.
- Fell more comfortable typing equations in LaTeX.
Paste LaTeX directly intro TeXmacs equations, see Paste->From.
- The journal I'm submitting to requires LaTeX.
Export your TeXmacs file into LaTeX.

2. I have limited time. Why learn a new system?

- TeXmacs empowers reproducible research. Scripts in Python, Scheme can be combined with mathematical software and operating system utilities to reliably reproduce the results submitted for publication.
- TeXmacs easily generates slides for lessons, conference talks similar to the Beamer LaTeX package, but without having to worry about frame, etc.