

# Using $\text{\LaTeX}$ in SageMathCloud (day 1 of 3)

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April 18, 2016

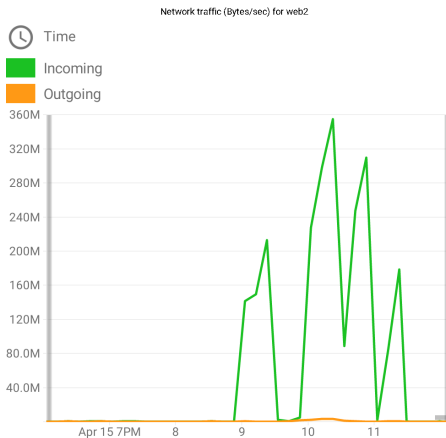
## What we will do today

- 1 Remind me to turn on the screencast; also, peer grading and new homework!
- 2 DDoS of SageMathCloud on Friday.
- 3 SageMathCloud  $\LaTeX$  Tutorial

# Distributed Denial of Service Attack on Friday

## DDoS

- 1 Wordpress pingback attack. Wrecked our class. Wrecked my weekend.
- 2 Now SMC uses <https://www.cloudflare.com/>.



# General Remarks about $\text{\LaTeX}$

## $\text{\LaTeX}$ ...

- 1 Create professional quality documents involving mathematics.
- 2 Completely open source and free. You can install it anywhere.
- 3 SageMathCloud is one (of many) ways to use it.

## Do the following

- 1 Create a new blank latex document.
- 2 Edit it, changing the title and your name, and seeing the result to the right.
- 3 Find a random math-related wikipedia article, and copy/paste a paragraph of text into your document (this shouldn't work too well, but gives you some math to play with).
- 4 Try out forward and inverse search.
- 5 Make errors and see them listed under issues.
- 6 Download the PDF.
- 7 Click build, then latex to see the output.
- 8 Change preview zoom and resolution.

## Do the following

- 1 In your document, type some formulas surrounded by dollar signs. Try each of the following and some variations on them:
- 2  $x^3$
- 3  $\sin(x^\pi)$
- 4  $e^{2\pi i}$
- 5  $\frac{2}{3 + x}$
- 6  $1 + 2 + \cdots + n$
- 7  $\sum_{i=1}^n i$
- 8  $\int_0^\pi \sin(x)$
- 9  $\sqrt{x^3 + 2}$

## Do the following

- 1 Put `\usepackage{sagemtex}` in the **preamble** of your latex document. This means put it after `\documentclass...` and before `\begin{document}`.
- 2 Try typing this formula in:  $2018 = \text{sage}\{\text{factor}(2018)\}$ .
- 3 Once that works, try some things from <http://mirrors.ibiblio.org/CTAN/macros/latex/contrib/sagemtex/sagemtexpackage.pdf>
- 4 `\sageplot[width=.7\textwidth]{plot(sin,0,1)}`