Sage Tutorials

Getting started with Sage

Judith Ludwig and Florent Schaffhauser, Computer-assisted mathematics, 2024

Today: We use **SageMathCell** for some basic introduction.

No installation, direct quick start as follows:

Go to: https://sagecell.sagemath.org/

SageMathCell

Type some Sage code below and press Evaluate.

```
1
```

Put code here →

Press evaluate

Evaluate

Language: Sage ⌄

Share

Result is displayed here

Help | Powered by SageMath

Let's try it.

SageMathCell

Type some Sage code below and press Evaluate.

```
1  5+7
```

Evaluate

Language: Sage

Share

```
12
```

Help I Powered by SageMath

Here's another example:

Type some Sage code below and press Evaluate.

```
1  f(x)=cos(x)
2  f.integrate(x)
```

Evaluate

Language: Sage

Share

```
x |--> sin(x)
```

One more:

results in a
beautiful plot
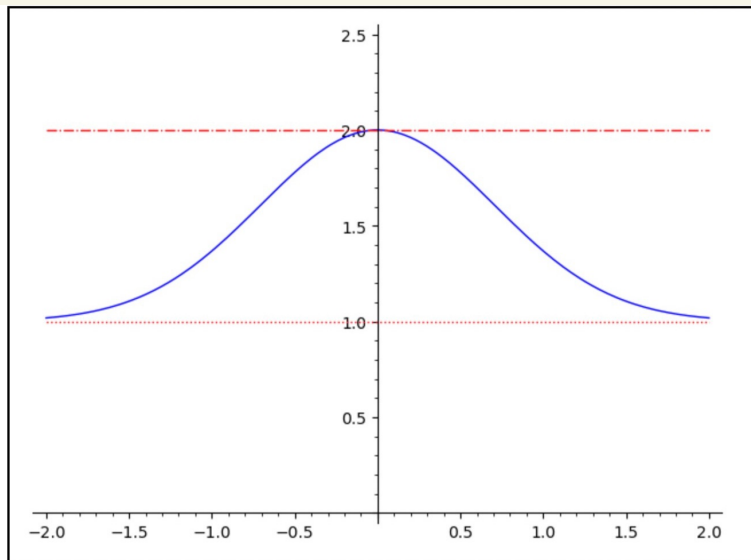
Let's get started with basic computations and some plotting:

Go to: https://doc.sagemath.org/html/en/index.html and explore.

e.g.
Select

Documentation

This is documentation for Sage 10.3. Documentations in other languages are available here.

Tutorials and FAQ

📄 A Tour of Sage
A one page introduction to Sage as a handy calculator.

📄 PREP Tutorials
This set of tutorials takes the reader from very minimal computer background to a good understanding of basic undergraduate Sage functionality. It includes several thematic "Quickstart" tutorials, and was originally developed as professional development material for the MAA.

📄 Tutorial
The best way to become familiar with Sage in only a few hours.

📄 Constructions
This document collects answers to some questions along the line "How do I construct ... in Sage?" Try to find out how to see the Riemann zeta function $\zeta(s)$ along the line $s = \frac{1}{2} + it$.

SAGE

Sage 10.3 Documentation

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PREP Tutorials

This is a set of tutorials developed for the MAA PREP workshops "Sage: Using Open-Source Mathematics Software with Undergraduates" (funding provided by the National Science Foundation under grant DUE 0817071) in the summers of 2010-2012. It is licensed under the Creative Commons Attribution-ShareAlike 3.0 license (CC BY-SA).

The original audience for these tutorials was mathematics faculty at undergraduate institutions with little or no experience with programming or computer mathematics software. Because the computer experience required is quite minimal, this should be useful to anyone coming with little such experience to Sage.

Although any mathematics the reader is not familiar with can simply be skipped at first, we do assume throughout that the reader is familiar with the concept of a function and different kinds of numbers. We also make liberal use of basic examples from calculus, linear algebra, and other areas. In the Quickstart tutorials, we assume familiarity with the topics at the level of a student who has just completed a course in the subject, or of a faculty member who is about to teach it.

Contents:

Then try
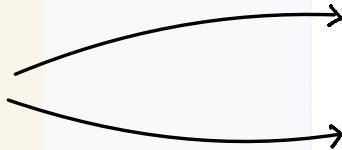
Ask questions, when you get stuck!