

Getting Acquainted with Sage

1 Accessing Sage

Sage is a powerful, freely available, open-source mathematics software system. Most of its functionality can be accessed through a web browser using the notebook interface.

This handout will guide you through a demonstration of some of Sage's basic capabilities that can be used for graphing surfaces in space.

Sage can be downloaded and installed on your own computer. It is, however, a large and complicated package that is under constant development. We have configured a Sage server that is accessible both on- and off-campus.

To use the server you will first need to create an account. To do this, open a web browser and enter the URL `http://sage.math.gordon.edu`. Click on the link "Sign up for a new Sage Notebook account" which is located below the username and password textfields.

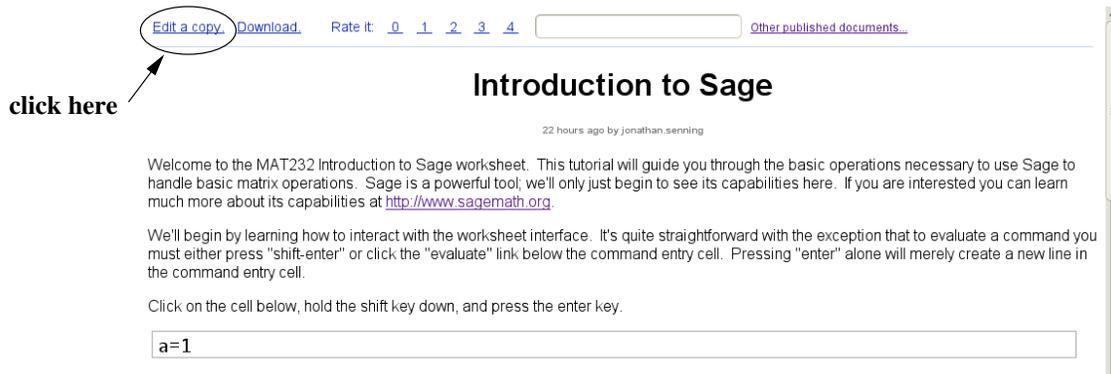
The screenshot shows the Sage Mathematics Software website. On the left, there is a navigation menu with links like "The Sage Notebook", "General and Advanced Pure and Applied Mathematics", "Use an Open Source Alternative", "Use Most Mathematics Software from Within Sage", and "Use a Mainstream Programming Language". On the right, there is a login form titled "Sign into the Sage Notebook v4.1" with fields for "Username:" and "Password:", a "Remember me" checkbox, and a "Sign In" button. Below the login form, there is a link "Sign up for a new Sage Notebook account" circled in red, with an arrow pointing to it from the text "click here" on the right. Below that, there is a link "Browse published Sage worksheets (no login required)".

Enter a username and password of your choice and click the "Create account" button at the bottom. You should be returned to the initial page and you can now enter your username and password in the textfields and click the "Sign in" button.

This brings you to your home screen. You can find prepared worksheets by clicking on the link "Published" link at the top of the page.



A list of published worksheets is displayed, click on the title of the “MAT223 Surfaces in Space” worksheet. To use this worksheet you will need to work with a copy of it; click on the “Edit a copy” link in the upper-left corner of the page.



Now follow the instructions in the worksheet.

When you are finished working through the worksheet, return to the top of the page and click on the “Save & Quit” button. This will return you to your Sage home page.

2 Creating your own worksheet

In the future when you want to use Sage you will probably want to create a new worksheet. Creating your own worksheet is easy; just click the “New Worksheet” link near the top-left of the Sage home page. By default new worksheets are named *Untitled*; it’s a good idea to change the name to something more descriptive. Use the “File” pull-down menu and select “Rename worksheet” to do this.