

MTK Basic Test 02 - Python Source Plus Minted

J. Simmons

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1 Test Importing Custom Python Libraries

This section tests the ability to use custom Python libraries.

```
from numpy import linspace
import MTK_Basic_Plotting

def f(x):
    return x^3 + 3

range_begin = -5
range_end = 5
x = linspace(range_begin, range_end, 1000)

MTK_Basic_Plotting.MakeSimplePlot('', x, 'x', f(x), \
                                   'f(x)', 'cubic.png')
```

Figure 1 ($f(x) = x^3 + 3$) is generated by the Python code above by calling the custom Python basic plotting library, MTK_Basic_Plotting.

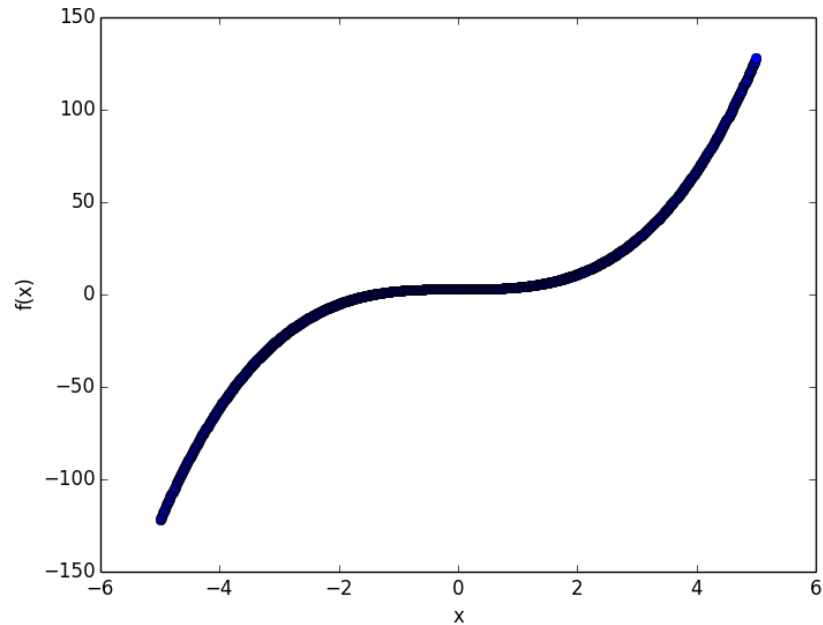


Figure 1: Demo plot from Sage

Appendix - Plotting Library Source Code

This section tests the ability to present formatted Python code in an external source file.

```

1  # MTK Basic Plotting Demo
2  # Author: J. Simmons
3  # Date: Feb. 2015
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```

```
15 # See the License for the specific language governing permissions and
16 # limitations under the License.
17
18 import numpy
19 import pylab
20
21 def MakeSimplePlot(title, x_arr, x_label, y_arr, y_label, filename):
22     """Make a simple x,y plot and save it to a file"""
23
24     pylab.clf()
25     pylab.plot(x_arr, y_arr, 'bo')
26     pylab.xlabel(x_label)
27     pylab.ylabel(y_label)
28     pylab.title(title)
29     pylab.savefig(filename)
```

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