

1 Testing PythonTeX

A message from Python!

```
pyconsole test
```

```
>>> var = 1 + 1
>>> var
2
```

1.1 external lib

3.6.9 (default, Nov 7 2019, 10:44:02) [GCC 8.3.0]

- /home/user/pythontex-test/pythontex-files-py
- /usr/lib/python36.zip
- /usr/lib/python3.6
- /usr/lib/python3.6/lib-dynload
- /home/user/.local/lib/python3.6/site-packages
- /home/user/.local/lib/python3.6/site-packages/pydbm-1.4.1-py3.6-linux-x86_64.egg
- /usr/local/lib/python3.6/dist-packages
- /usr/lib/python3/dist-packages
- /usr/share/texlive/texmf-dist/scripts/pythontex
- /home/user/pythontex-test

```
<module 'ext_ode' from '/home/user/pythontex-test/ext_ode.py' > 2
```

1.2 Symbolic computing with SymPy

```
phi = Symbol(r'\phi')
h = Integral(exp(-phi**2), (phi, 0, oo))
```

$$\int_0^{\infty} e^{-\phi^2} d\phi = \frac{\sqrt{\pi}}{2}$$

1.3 Plotting

```
>>> import matplotlib
>>> matplotlib.use('pgf')
>>> import numpy as np
>>> import matplotlib.pyplot as plt
>>> xx = np.random.randn(1000)
>>> xx = np.sort(xx)
>>> plt.plot(xx)
[<matplotlib.lines.Line2D object at 0x7f580c2aa278>]
>>> plt.savefig('myplot.pdf', bbox_inches='tight')
```

