pip install gekko

```
Collecting gekko
  Downloading gekko-1.0.2-py3-none-any.whl (12.4 MB)
     |████████████████████████████████| 12.4 MB 5.0 MB/s
Requirement already satisfied: numpy>=1.8 in /usr/local/lib/python3.7/dist-packages (from gekko) (1.21.6)
Installing collected packages: gekko
Successfully installed gekko-1.0.2
```
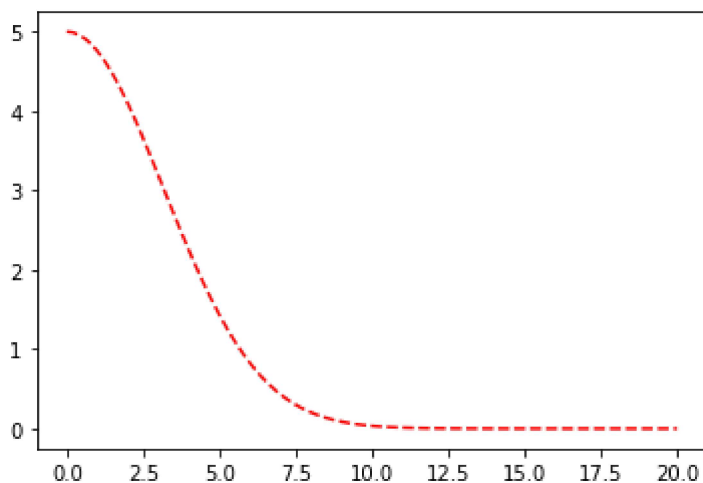
```python
import numpy as np
from gekko import GEKKO
tm=np.linspace(0,20,100)
m=GEKKO(remote=False)
m.time=tm
k=10
y=m.Var(value=5.0)
t=m.Param(value=tm)
m.Equation(k*y.dt()==-t*y)
m.options.IMODE=4
m.solve(disp=False)
```

+ Code   —   + Text

```python
ya=5*np.exp(-tm**2/(2*k))
```

```python
import matplotlib.pyplot as plt
%matplotlib inline
plt.plot(tm,ya,'r--', label='Analytical Solution')
```

[<matplotlib.lines.Line2D at 0x7f3054f3fd10>]

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