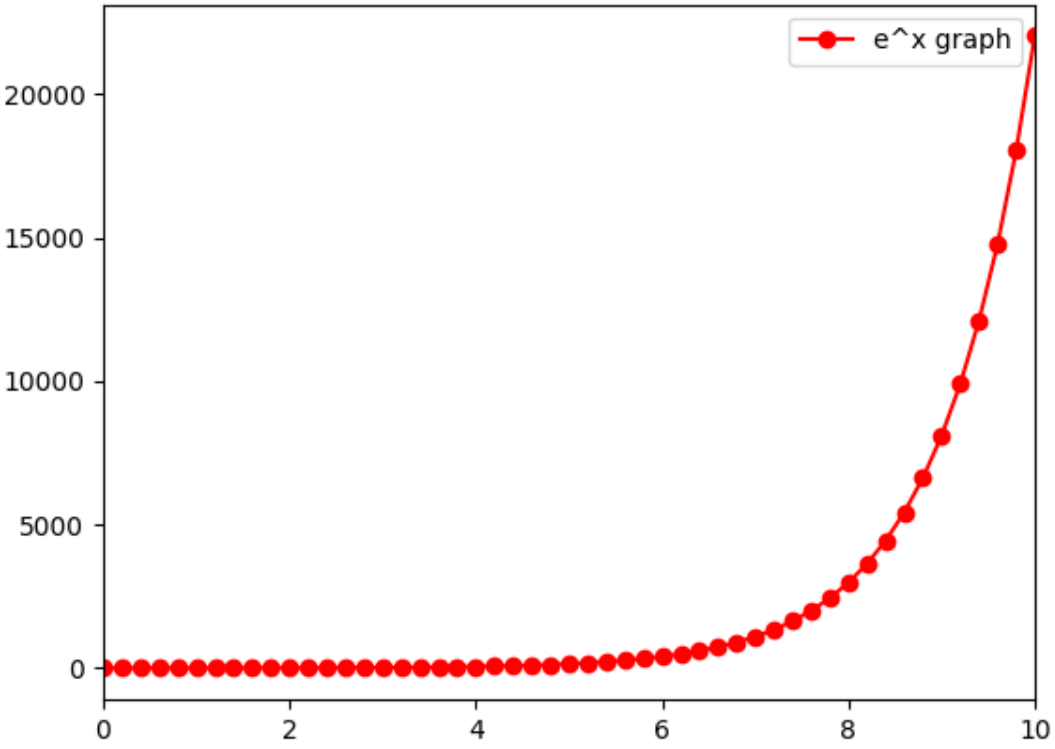
1.



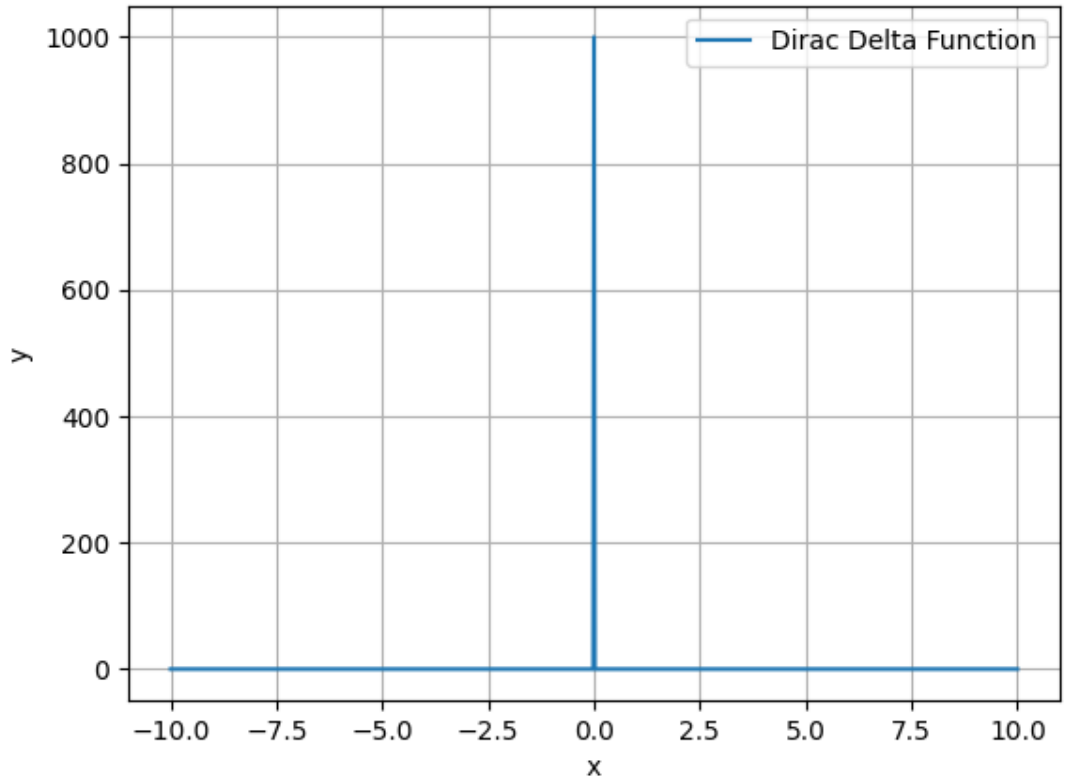

```
import pylab as pl

x = pl.linspace(0, 10, 51)
y = pl.exp(x)

pl.plot(x, y, 'r-o')
pl.xlim(0,10)

pl.legend(["e^x graph"])
pl.show()
```

2.



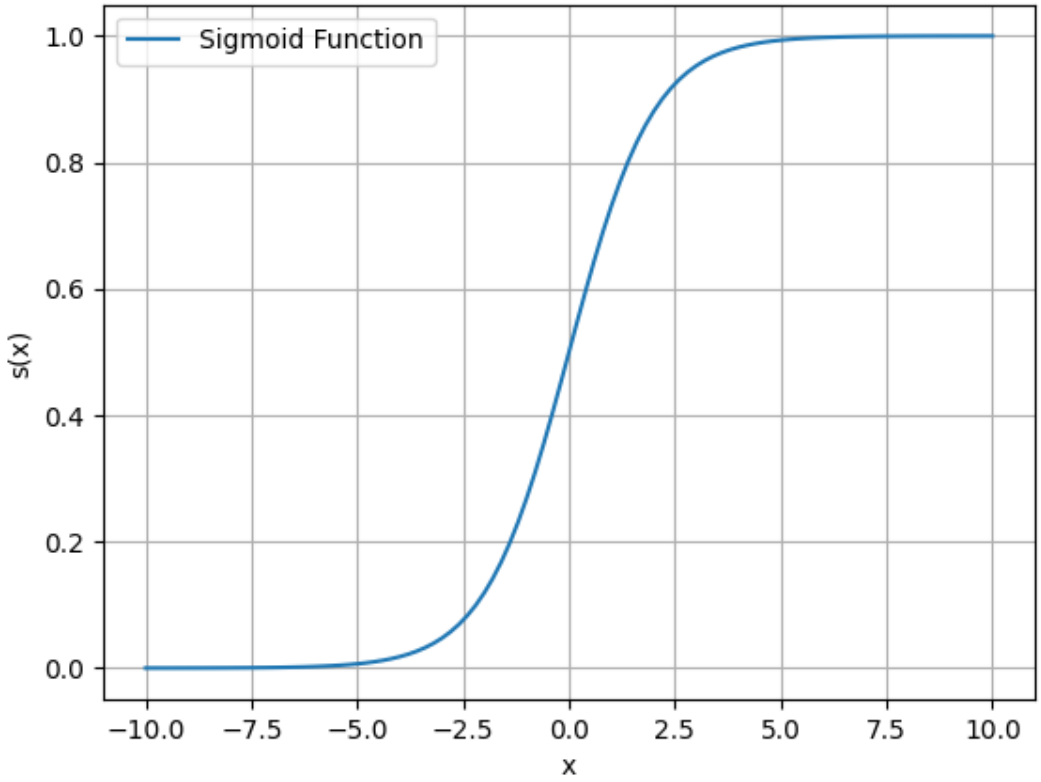

```python
import numpy as np
import pylab as pl


def dd(x, epsilon=0.001):
    return np.where(np.abs(x) < epsilon, 1/epsilon, 0)

x = pl.linspace(-10, 10, 1001)

pl.plot(x, dd(x))
pl.xlabel('x')
pl.ylabel('y')
pl.legend(['Dirac Delta Function'])
pl.grid(True)
pl.show()
```

3.




```python
import numpy as np
import pylab as plt

def sig(x):
    return 1 / (1 + np.exp(-x))

x = np.linspace(-10, 10, 101)

plt.plot(x, sig(x))
plt.xlabel('x')
plt.ylabel('s(x)')
plt.legend(['Sigmoid Function'])
plt.grid(True)
plt.show()
```