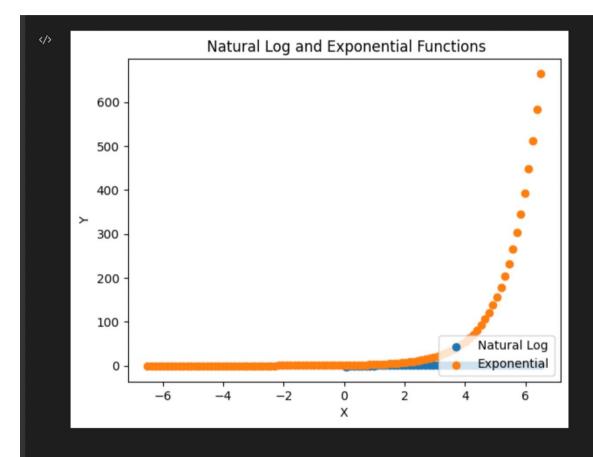
```
+ Code + Markdown | ▶ Run All ➡ Clear All Outputs ♥ Restart | ➡ Variables ➡ Outline …
                                                                                                                                                         Python 3.11.3
                                                                                                                                             import numpy as np
         import matplotlib.pyplot as plt
[42]
      ✓ 0.0s
                                                                                                                                                                Python
        x = np.linspace(0, 1, 50)
        y = np.log(x)
        z = np.exp(x)
         plt.show()
      ✓ 0.0s
                                                                                                                                                                Python
     /var/folders/ws/nv8p5rp15k73l2h9kcnt2v9w0000gn/T/ipykernel 40666/1613511777.py:2: RuntimeWarning: divide by zero encountered in log
       y = np.log(x)
         x = np.linspace (0, 1, 50)
[44] \( \square 0.0s
                                                                                                                                                                Python
        y = np.log(x)
         \frac{1}{2} = np.exp(x)
        plt.scatter (x, y, label = 'Natural Log')
        plt.scatter (x, z, label = 'Exponential')
         plt.xlabel("X")
        plt.ylabel("Y")
        plt.legend (loc = 'lower right')
        plt.title (' Natural Log and Exponential Functions')
         plt.show()
      ✓ 0.2s
[54]
                                                                                                                                                                Python
     /var/folders/ws/nv8p5rp15k73l2h9kcnt2v9w0000gn/T/ipykernel 40666/465969321.py:1: RuntimeWarning: invalid value encountered in log
       y = np.log(x)
```



[46]

```
y = np.sin(x)
2 = np.cos(x)
  plt.scatter (x, y)
plt.scatter (x, z)
  plt.show()
✓ 0.1s
  1.00
  0.75
  0.50
  0.25
  0.00 -
-0.25
-0.50
-0.75 -
-1.00 -
                                   -2
                                               ò
                                                          2
             -6
                        -4
                                                                     4
                                                                                6
```

Both graphs on or

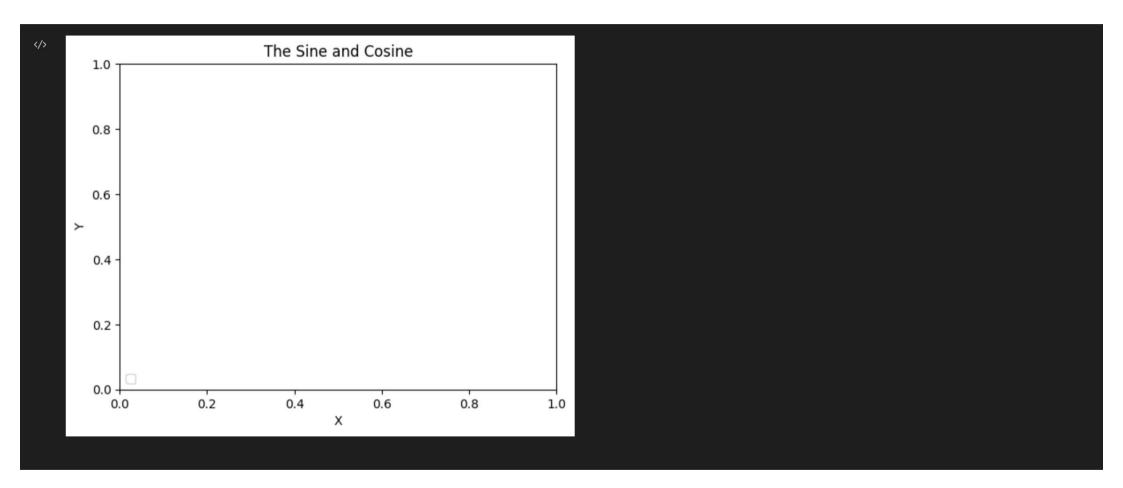
✓ 0.0s

[48]

Python

Python

```
plt.plot(x, y, label = 'Sine')
  plt.plot (x, z, label = 'Cosine')
  plt.show()
✓ 0.0s
                                                                                                                                        Python
                                                                                                                              1.00 -
 0.75 -
 0.50 -
 0.25 -
 0.00 -
-0.25 -
-0.50 -
-0.75 -
-1.00 -
                           -2
                                            2
          -6
                   -4
                                    Ó
                                                     4
                                                             6
  plt.xlabel ("X")
  plt.ylabel ("Y")
  plt.legend (loc = 'lower left')
  plt.title ('The Sine and Cosine')
  plt.show()
```



```
x = np.linspace(-6.5, 6.5, 100)
   y = np.sin(x)
   z = np.cos(x)
   plt.plot (x, y, label = 'Sine')
   plt.plot (x, z, label = 'Cosine')
   plt.xlabel ("X")
   plt.ylabel ("Y")
   plt.legend (loc = 'lower left')
   plt.title ('The sine and cosine')
   plt.show()
✓ 0.1s
                                                                                                                                                     Python
                                The sine and cosine
     1.00
     0.75
     0.50
     0.25
     0.00
    -0.25
    -0.50
    -0.75
                 Sine
                  Cosine
    -1.00
                                 -2
                                                    2
                        -4
                                           0
                                                             4
                                                                      6
                                           Χ
```