

IEMS 351 Lab 1

September 2024

Exercises

Step 1: Import math, numpy, and matplotlib packages.

```
1 import numpy as np
2 import math
3 import matplotlib.pyplot as plt
```

Step 2: Please try out the following and share your observations:

1. Plot $f(x) = e^x$ from $x = -5$ to 5.
2. Plot $f(x) = x^2$ from $x = -5$ to 5.
3. Plot $f(x) = \sin \frac{1}{x}$ from $x = 0.01$ to 2.
4. Plot $f(x) = |x|$ from $x = -1$ to 1.
5. Plot $f(x) = \max(-x, x)$ from $x = -1$ to 1.
6. Plot $f(x) = \max(-x, x) - 0.2x^2$ from $x = -4$ to 4.