ses8prompt

January 30, 2024

0.1 Import MatPlotLib and numpy

```
[5]: import matplotlib.pyplot as plt
     import numpy as np
```

0.2 Create an array x ranging from [0, 1] in 100 steps

```
[6]: x = np.linspace(0, 1, 100)
```

0.3 Define functions that returns sin(x) and cos(x)

```
[7]: def retSin(x):
         return np.sin(x)

     def retCos(x):
         return np.cos(x)
```

1 Create a multipanel plot (1 row, 2 columns) and plot sin(x) vs x in the left panel and cos(x) vs x in the right panel with the respective labels of sin(x) and cos(x)

```
[18]: s = retSin(x)
      c = retCos(x)

      f, ax = plt.subplots(1, 2, figsize = (4 * ncolumn, 4 * nrow))

      ax[0].plot(x, s, color = "red", linewidth = 1.5, label = "Sin(x)")
      ax[0].set_xlabel("x", fontsize = 14)
      ax[0].set_ylabel("sin(x)", fontsize = 14)

      ax[1].plot(x, c, color = "blue", linewidth = 1.5, label = "Cos(x)")
      ax[1].set_xlabel("x", fontsize = 14)
      ax[1].set_ylabel("cos(x)", fontsize = 14)

      plt.tight_layout()
```

```
plt.savefig("sin(x) vs. cos(x).png", bbox_inches = "tight", dpi = 400)
```