Assignment 05: Plotting, Scheming Even

1. Let's go back to our square wave approximation from Assignment 2:

$$a_n = 2n + 1 \tag{1}$$

$$s = \sum_{n=0}^{\infty} \frac{sin(a_n t)}{a_n},\ n \in \mathbb{Z}_{51},\ t \in [-\pi, \pi] \tag{2}$$

   Plot the approximation along with the components superimposed in the same plot. Add a title, reasonable bounds for the x and y-axis, and ticks and tick labels for the x-axis.

2. Repeat the previous exercise but now plot the approximation in one subplot and all the components in another. Additionally, add a figure title with `sgtitle()`.

3. Plot the following surface:

$$\mathcal{S} = [-2\pi, 2\pi] \tag{3}$$

$$z = x\sin(x) - y\cos(y),\ (x, y) \in \mathcal{S} \times \mathcal{S} \tag{4}$$

Extra: Plot the MATLAB logo![1]

[1] `https://www.mathworks.com/help/matlab/visualize/creating-the-matlab-logo.html`

