

For each of the problems below, you should hand in your code and a hardcopy of your plot.

- 1) (2 pts) Generate any 2D plot of your own choosing. Your plot should have axis labels, titles, etc. I should be able to tell what you are plotting just from the information on your plot.
- 2) (3 pts) Generate a plot of the sine function on the interval $x \in [0, 2\pi]$. Your plot should have a solid red line with green point markers (you can choose the marker type).
- 3) (3 pts) Plot the parametric curve

$$\begin{aligned}x(t) &= \sin\left(5t + \frac{\pi}{2}\right); \quad t \in [0, 2\pi] \\y(t) &= \sin(4t).\end{aligned}$$

You should use at least 400 points and set the aspect ratio to equal (see the example in the notes). This is called a Lissajous curve and it should look something like what you would see on the computer screen in a bad 1950's sci-fi movie (mainly because this is the type of figure used in those movies).