Data Presentation via Plots

Features of a Good Plot

○ A good plot should make sense!

   A good plot is consistent with the theory and numerical results generated in the lab. If this is not the case, some explanation must be provided as to why the data do not behave as expected.

○ A good plot is easy to read:

   – It has proper labels, titles, legends, and a grid if necessary.

   – Its limits are adjusted to the portion of the data that is the focus of our study.

   – Its visual properties, such as the line thickness, the marker size, color, and the font size of axes or labels are set properly.

○ A good plot has a thorough, yet succinct description (also known as caption), which guides the reader through the data presentation.

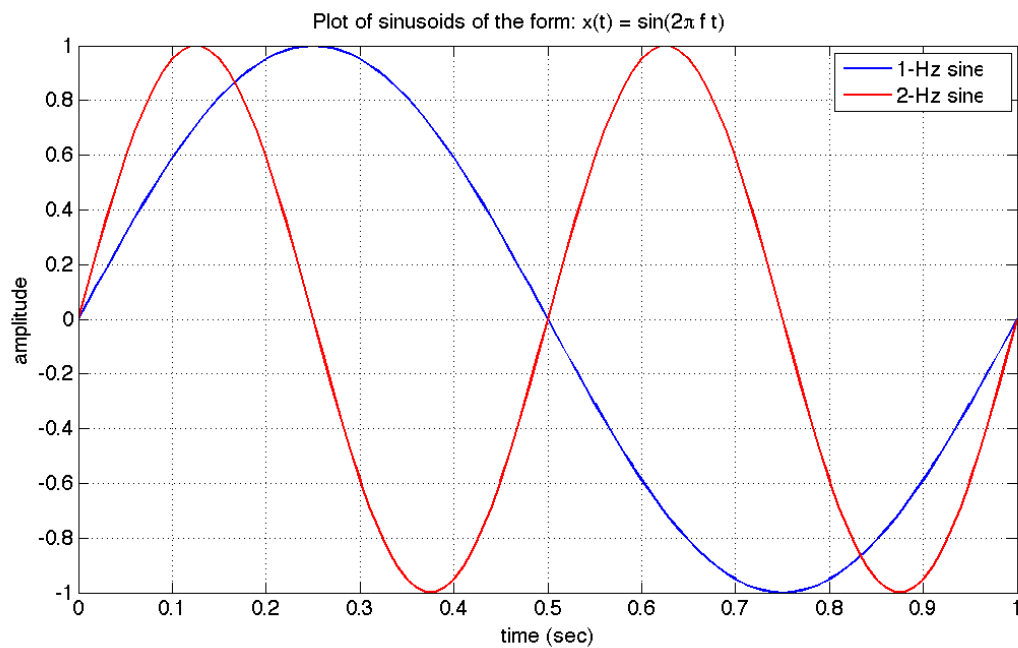# Examples of Good and Bad Plots

Figure 1: Plot of two sinusoids of different frequencies over one second. The 1-Hz sinusoid is shown with a solid blue line and the 2-Hz sinusoid with a solid red line.
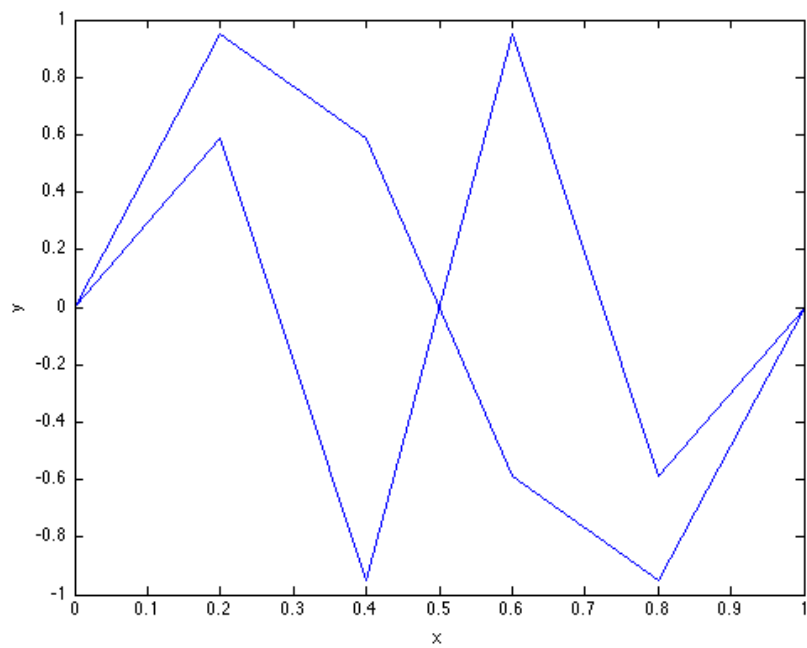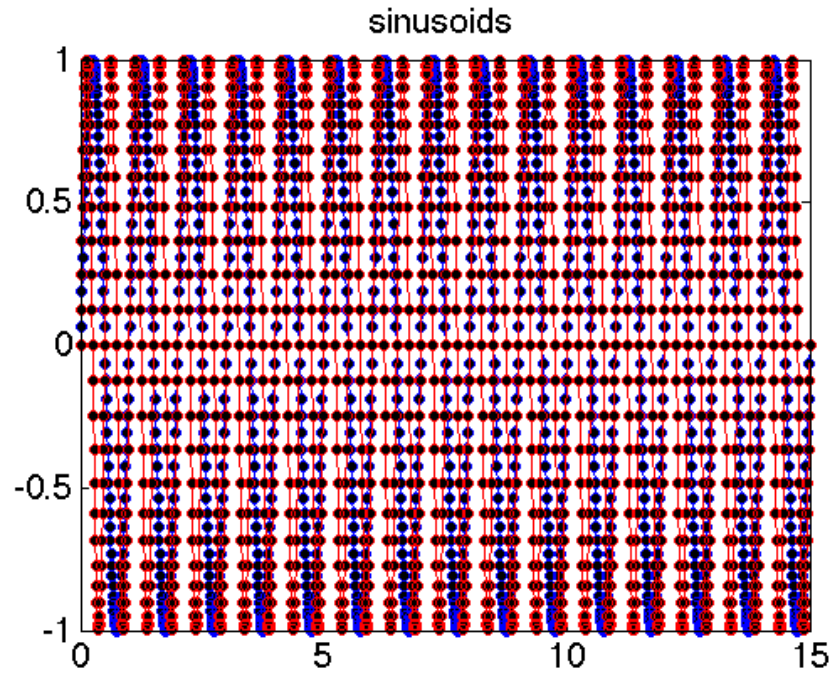

Figure 2: Two sine functions.

sinusoids

Figure 3:
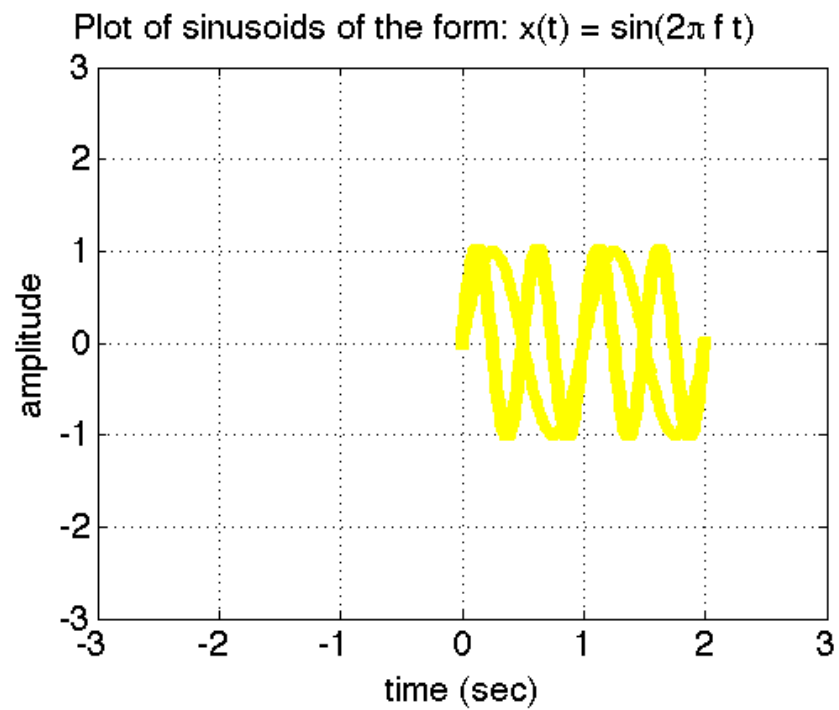

Plot of sinusoids of the form: x(t) = sin(2π f t)

amplitude

time (sec)

Figure 4: Sinusoids of frequencies 1 Hz and 2 Hz.