Lab 3A + 3B - LoggerPro Tutorial

Basics:

1. Save video file to computer
2. Enter logger pro
3. Click "Insert" then "video..."
4. Select your video and open
5. Click  This will **open the video analysis task bar**.
6. Press  to **set the scale**: Click and drag the length of the scale/known length. Once you release, a dialog box will open, enter the measurement value and units. Click OK.
7. Click on  Click where you'd like to **place the origin** of your axis
    a. If misplaced, just drag and drop at the desired location
    b. If you need to change the orientation/angle of the axis, click and drag the yellow circle on the x-axis
    c. Use this button whenever you'd like to reposition your axis

Graph I:

1. Click  to **collect data points**
    a. Click on the point on the spring you will focus on
    b. With each click the video will advance one frame, click the point's new position each time
2. Your data will appear on a graph
    a. To get a best fit curve:
        i. Click on the **curve fit button** ()
        ii. Click "Define Function"
        iii. In the dialog box enter "A*sin(B*t+C)+D" Click OK
        iv. Click "try fit" - if you see a sine curve fit to your data click OK - if it closes without doing anything, redefine the function without "+D", try fit again and click OK.
        v. The variables A,B, C, (and D) will be outlined in the curve info box now visible on your graph.
3. "Snip" and/or save the data/graph

Graph II:

1. Click the "Data" task button and "Clear all data"

2. Right click on the video box, select "movie options." Click on the 1st option below "Video Analysis" (Enable multiple points per frame)
3. Exit the movie options
4. Find a frame of your movie where the curves of the wave are easily visible with good amplitude
5. Readjust origin if needed (along nodes is typically best)
6. Add points () along the curve of the wave(s)
7. Return to your graph
    a. Left click on the x-axis label "Time," select "X"
    b. Left click on the y-axis label(s), select "Y"
    c. Fit curve as before and "snip" and/or save