## KEED

## Lab Write-ups with Computers

## Data Table

| Independent Variable <br> (units) | Dependent Variable <br> (units) | Calculated Variable <br> (units) |
| :---: | :---: | :---: |
| (Uncertainty) $\pm$ | $\pm$ | $\pm \ldots$ |
|  |  |  |



## Construction Guidelines



- Most word processing programs allow users to insert data tables into a document.
- Click on the Table tab in the toolbar.
- Highlight Insert
- Select Table (Choose the number of columns and rows.)
- Include the independent and dependent variables with units at the top of each column.
- Include additional columns for calculated variables and units.
- Make sure you leave room below the table to show any work you may have had to do.


## Graph by Computer (Using Logger Pro)

1. Start the app Vernier Graphical Analysis without a probe attached and select Manual Entry from the initial screen.
2. Click on Untitled in the upper left-had corner and save the file with an appropriate title.
3. Click on the three dots at the top of each data column, in turn, and choose Column Options.


Type an appropriate name (Distance, Time, ...) and units (m, s, ...). Then choose the appropriate Displayed Precision based on your data. You will probably want to keep the same number of Decimal Places, such as 1 or 2 (from the drop-down menu), depending on what your data looks like. Click Apply.
4. Type your data into the table. Data points should appear on the screen.
5. In the lower left corner, click on the Graph Options icon (shown at right) and enter an appropriate title for your graph. Underneath both $x$-axis range and $y$-axis range, choose Always Show 0 from the drop-down menus to be sure that the origin is shown.
6. Also from the Graph Options icon, choose Apply Curve Fit and choose an appropriate line or curve from the drop-down menu (Linear, Proportional (which is the same as Direct), ....) and click Apply. Note that a box now displays that gives you the slope and y-intercept of the line (if it is a line) among other statistics. These may be helpful in writing the equation for the relationship you have graphed.

