Developing Metric/English Conversion Factors
By Graphing

Name_____ Block ____

When carefully drawn, a graph can be a useful scientific tool. Using the measurements you have already made of 5 different lines in metric (centimeters) and English (inches) measurements, a graph can be drawn that will help you find a relationship between the measurements.

A well-drawn graph has the following elements:

A. Descriptive graph title
　　Example: The Relationship Between Grades and Hours Spent Sleeping

B. Titled axes with units
　　Example: Time (days) or Speed (miles/hour)

C. Properly scaled axes
　　Example: Divisions of meters for a plot of distance run in a minute

D. Proper ranges of numbers on axes
　　Example: Largest data point is 3.2 seconds? Use divisions of 0.1 second up to a largest value of 3.5 seconds to fill the available space. Plan ahead—the number of divisions on your paper may not agree with the number of divisions you want to use.

E. Carefully plotted data
　　Example: Use a ruler or other straightedge to help you line up the data with the axis.

F. Trend line
　　Straight line through "middle" of your data – as many points above it as below it.

1. Carefully applying these 5 principles, create a graph of your measurements of your lines. Put inches on the horizontal axis, and centimeters on the vertical axis.

2. Does your trend line go through the origin? Should it? Why or why not?

3. For every one inch you go over, how many centimeters does your trend line rise?

4. What is the mathematical name for this relationship?