Name: _____

Pre-lab #1: Measurements and Data Analysis Techniques

1. Do experimental measurements give the "true" value of a physical quantity? Explain.

2. Express the numbers listed below to three significant figures, writing the numbers in the first column in normal notation and those in the second column in powers-of-10 (scientific) notation.

1.065		67,000	
2347		0.2140	
10.07		29.35	
0.1133		0.007865	
26,302		97,000,000	

3. Use a ruler to measure the length *L*, width *W*, and height *H* of your physics textbook in cm:

L = (_____ ± _____) cm *W* = (_____ ± _____) cm *H* = (_____ ± _____) cm

Compute the volume of your textbook using $V = LWH$ = _____.

Write out the equation needed to compute σ_V, your uncertainty estimate for this volume (using "Rule 2" from the Data Analysis section of your Lab Manual) and determine this value:

σ_V =

Final Result: *V* = (_____ ± _____)