



## Measurement and Error

## Lab #1

**Purpose:** To gain expertise in measuring. We should learn about precision and how many numbers are required to record data properly. We should always record the proper units.

**Method:**

1. Measure the drawing of the pencil below. Record your data in centimeters. Report your units.



Measured length of pencil: \_\_\_\_\_

2. Watch the slide show on Measurement and Error.
3. Measure the drawing of the pencil again using information from discussion after watching the slide presentation. Record your data. Do not change your answer for Step 1!

Measured length of pencil: \_\_\_\_\_

**Data Processing:**

Determine the class average from Step 1: \_\_\_\_\_

Determine the class average from Step 3: \_\_\_\_\_

Compare the answers before and after watching the slide. Does anything stay about the same? If so, what?

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Compare the answers before and after watching the slide. Does anything about the answers change significantly? If so, what?

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Write the formula for calculating percent error: \_\_\_\_\_

Calculate the percent error in the space below. Be sure to show the substitutions into the formula and then solve.