Chemistry 65 NAME:_____

EXPERIMENT # 2

MEASUREMENTS
REPORT FORM

Purpose:

Data & Observation:
(All data should be recorded with the proper units and number of significant digits)

Part 1:

Length of lab notebook (in cm) _____

Length of lab notebook (in inches) _____

Ratio (cm/in):_____ Ratio (in/cm):_____

Percent error (cm/in ratio): _____
(show calculations below)

Length of dollar bill (in cm) _____

Length of dollar bill (in inches) _____

Ratio (cm/in):_____ Ratio (in/cm):_____

Percent error (cm/in ratio): _____
(show calculations below)

EXPERIMENT # 2

Part 2:

Mass of coin using centigram balance: _____

Mass of coin using analytical balance:_____

Uncertainty of a balance is usually stated in terms of the last measured digit. For example, a decigram balance measures to a tenth of gram (0.1 g) and therefore its uncertainty is stated as ±0.1 g or tenth of a gram.

State the uncertainty of each balance you used as indicated below:

Centigram: _____ g

Analytical: _____g _____ mg

Part 3:

Volume of 2 oz of tap water:_____

Ratio of volumes (mL/oz): _____

State the uncertainty of the following measuring glassware in your locker: (include units)

Graduated cylinder (100 mL): _____

Graduated cylinder (10 mL): _____

Beaker (50 mL): _____

Thermometer:_____

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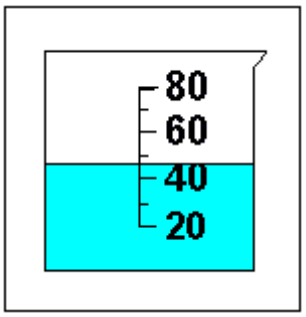
Questions:

1. Is the percent error value determined in part 1 of this experiment a measure of accuracy or precision of your measurements? Briefly explain.

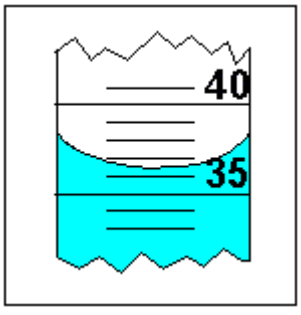
2. Using the same ruler in part 1 of your experiment, how could you improve the precision of your measurements?

3. If you were asked to measure 5.80 mL of a liquid, which glassware in your locker would be the proper one to use?

4. Record each of the measurements below to the proper number of digits:



_____ mL



_____ mL