Name: _____ Block: _____ Date: _____

IC 2.4 & 2.5 – Uncertainty in Measurement and Significant Figures Worksheet

A. Review your lecture notes and read Introductory Chemistry (IC) Chapter 2.4 and 2.5. In your own words, summarize the rules for determining the number of significant figures in a measurement.

B. Determining Significant Figures: How many sig figs are in each of the following measurements?

1. 5.40 mm
2. 210 kg
3. 801.5 L
4. 1,000 lbs.
5. 101.0100 g
6. 3 cars
7. 0.0000546 g
8. 1.2×10^3 Pa
9. 0.00120 mol
10. 0.0102 mol
11. 9.190×10^{-6} m
12. 2,370.0 K
13. 2000000 °C
14. 27 students

C. Questions on Estimation and Measurement and Sig Figs:

15. Why are significant figures important when taking data in the laboratory?

16. Why are significant figures NOT important when solving problems in math class?

17. Using two different rulers, I measured the length of my foot to be 27.1 centimeters and 27.10 centimeters. Explain the difference between these two measurements and between the two measurement instruments (rulers).