Honors Chemistry Hour\_\_\_\_ Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
Dr. Wexler
Significant Figures Worksheet 1
Date:

Sig. Fig. Rules

Count Rule 1: Non-zero digits always count (340 has two sig.figs)

Count Rule 2: In a number less than 1, leading zeroes never count (0.002 has one sig.fig)

Count Rule 3: Zeroes between non-zero digits always count (0.00202 has three sig.figs)

Count Rule 4: Zeroes at the end of decimal digits always count (340.00 has five sig.figs)

Count Rule 5: Zeroes in a whole number only count if there’s a decimal after them or a bar above them.
 (10 has 1 sig.fig.; 10. Has 2 sig. figs; 1ŌO has two sig. figs)

Operation Rule 1: Addition & Subtraction:

Restricted by the fewest number of decimal places (3 -1.5 = 2)

Operation Rule 2: Multiplication & Division:

Restricted by the fewest number of sig. figures (1.0 x 5.68 = 5.7)

**Part 1: Count the number of sig. figs in the following measurements:**

1) 67.05 mL \_\_\_\_\_\_\_\_ 2) 0.003 kg \_\_\_\_\_\_\_\_

3) 45,000 L \_\_\_\_\_\_\_\_ 4) 54.70 cm \_\_\_\_\_\_\_\_

5) 194.3 m2 \_\_\_\_\_\_\_\_ 6) 230. mm \_\_\_\_\_\_\_\_

7) 29,037 cm2 \_\_\_\_\_\_\_\_ 8) 0.08200 mg \_\_\_\_\_\_\_\_

9) 5ŌO g \_\_\_\_\_\_\_\_ 10) 2 inches \_\_\_\_\_\_\_\_

**Part 2: Solve the following arithmetic problems and give the answers**

**with the correct number of sig. figs.**

11) 74.862 – 3.34 12) 6.224 + 2.5392 + 4.2

13) 5.635 x 2 14) 23.552/3.0

15) (6.93 – 2.0)/4.100 16. (64.78)(92)