**Name: Date:**

**Chemsitry 20**

Sig Fig Problems:

1) Underline all significant digits in each question

 a) 5 600 b) 8 060 c) 3.090 d) 0.0112

 e) 0.002 f) 4.007 g) 0.0040 h) 0.0390

 i) 0.00700 j) 8 000 k) 0.06 l) 120.0

2) Write the number 840.556 with…

 a) five sig figs \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 b) four sig figs \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 c) two sig figs \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. one sig fig \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3) Perform the following operations and express the answer with the correct number of

 sig figs.

 a) 5.63 b) 873.6 c) 2.338

 0.024 - 42.17 0.00041

 + 1.6470 + 55.00009

 d) 263.12 e) 37800 =

 x 120\_\_\_ 18.00 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. (160)(2.7) =

(3.9)(678) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Unit Conversion Problems:

1) How many nm are in 2.68 km?

2) How many Mg are in 2.86 kg?

3) How many mm are in 1.59 cm?

4) How many seconds are there in one century?

5) On a certain school yard where the sport of marbles is taken very seriously, marbles

 are traded on occasion. The black market value on marbles is…

* 4 cat’s eyes = 1 cob
* 2 peeries = 1 agate
* 5 cat’s eyes = 7 agates

 How many peeries could a marble player acquire through trading if he/she started with

 8 cobs?

6) If the density of Lead is 11.3g/mL, then what would it be in units of mg/L?

7) If the solubility of a substance is 2.88mg/L then what would it be in units of g/L?

8) Robert Millikan needs to buy (16)1000 mL beakers at a cost of $24.95 per

 dozen. What was his total cost?

9) How long in weeks would it take for a spaceship to travel from earth to planet Pluto,

 given that the distance is 5,900 million km and the spaceship travels at a speed of

 48,000 km per hour?

10) The density of Copper is 8.96g/cc. If a rectangular sheet of copper is 14.6 cm wide,

 38.4 cm long and 0.028 cm thick, what is the mass of this piece of copper?