CH 151 Sample Quiz #1   Name: _____

Be sure to show all work, use the correct number of significant figures, circle final answers and use correct units in all problems.

1. Automotive batteries generally are filled with sulfuric acid. If a battery has a volume of 1.86 L and contains 3.42×10^6 mg of sulfuric acid, what is the density of sulfuric acid in g/mL? (5 points)

2. A child's fever medicine has a concentration of 250 mg/mL. If a child receives 2.0 teaspoons of this medicine, how many mg of medicine is being received? (1 teaspoon = 4.93 mL) (5 points)

3. Perform the following calculations. Report the answer to the correct number of significant digits. (5 points)

    110.23 cm + 0.989 cm + 1.20 cm   _____

    $$\frac{\left(2.34 \times 10^3 \text{ cm}\right)\left(4.2021 \times 10^{-6} \text{ cm}\right)}{\left(8.7 \times 10^3 \text{ s}\right)}$$ _____

    154.0 = 3.76 x Q   Q = _____

4. Convert the following quantities: (5 points) Watch sig figs!

    157.7 K to °C.

    9.22 g/cm³ to **g/mm³**

    7.360 cg to **ng**