Chapter 1 Review

Name: _____

Part 1: Convert the following values to the desired units. Show work.

1) 0.23 km = 230000 mm

2) 4600 pg = 0.0046 μg

3) 240 lb = 109 kg

4) 120,000 cm^3 = 1.2 hL

5) 19.0 gal = 71.8 L

6) 50.0 dm = 197 in

7) 0.0056 gal = 21000 μL

8) 71.2 lb = 322 hg

9) 190000 ms = 0.053 hours

10) 23.7 yd = 2170 cm

11) 19 mi/hr = 8.5 m/s

12) 980 in^2 = 0.63 m^2

13) 2300000 cm^3 = 5.5×10^{-10} mi^3

14) 192 kg/L = 192 g/mL

Part 2: In the following density situations, calculate the missing value:

1) mass = 46 g, volume = 7.5 mL

6.1 g/mL

2) volume = 10.6 cm^3, mass = 0.86 kg

0.081 kg/cm^3

3) density = 25 kg/L, volume = 30 mL

0.75 kg

4) mass = 23.8 g, density = 2.71 g/cm^3

8.78 cm^3

Part 3: For each number, tell how many sig figs and convert to the other notation

Regular notation	Sig Figs	Scientific Notation
0.000000049209	5	4.9209×10^{-8}
90.10	4	9.010×10^{1}
7000000000	1	7×10^{9}
0.00007910	5	7.9100×10^{-5}
1.157	4	1.157×10^{0}
23.540	5	2.3540×10^{1}
190000000	2	1.9×10^{8}
560.	3	5.60×10^{2}

Part 4: Express the answer to each problem in the proper number of significant figures. Then express the answer in scientific notation.

1) 468 + 1203.89 = 1672 Scientific Notation: 1.672×10^{3}

2) 19.67 x 232 = 4560 Scientific Notation: 4.56×10^{3}

3) 6.9 / 1102 = 0.0063 Scientific Notation: 6.3×10^{-3}

4) 1123.54 - 151.9 = 971.6 Scientific Notation: 9.716×10^{2}

5) 122.09 x 64 = 7800 Scientific Notation: 1.672×10^{3}

Part 5: Graph the following data and determine the slope of the data:

Mass (g)	Volume (mL)
41.58	15.4
258.12	95.6
46.71	17.3
117.99	43.7
167.67	62.1
143.64	53.2
210.87	78.1

Slope = 2.7 g/ml