Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Hour: \_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_

# AP Chemistry: *2HW*

***Directions: Complete the following problems.***

1A. If a Millikan oil drop has a net charge of –6.40 x 10–19 C, how many electrons must have been added to the drop?

1B. In coulombs, how much positive charge is there IN a barium nucleus? …ON a barium ion?

2A. How many angstroms are in 1.50 feet? (1 inch = 2.54 cm)

2B. How many cubic angstroms occupy exactly one milliliter?

How many p+, n0, 3A. 79Se2– 3B. Cs–131

and e– are in each

of the following? 238U 52Cr3+

25Mg2+ 18O2–

4A. An element has four isotopes, with percent abundances and masses, as shown below. Calculate the atomic weight and identify the element. 4.35% (49.9460 amu) 9.50% (52.9407 amu)

83.79% (51.9405 amu) 2.36% (53.9389 amu)

4B. Copper has an average atomic mass of 63.546 amu. Its two isotopes are Cu-63 (which is 69.17% abundant and has a mass of 62.9296 amu) and Cu-65. From this information, calculate the mass of Cu-65.

4C. Gallium has two stable isotopes. Ga-69 has a mass of 68.9256 amu, while Ga-71 has a mass of

70.9247 amu. Determine the percent abundance of each isotope.

ANSWERS: 1A. 4 electrons 2A. 4.57 x 109 angstroms 4A. 51.996 amu; chromium

1B. 8.96 x 10–18 C; 3.20 x 10–19 C 2B. 1 x 1024 angstroms3 4B. 64.9290 amu

4C. 60.11%; 39.89%

**Nomenclature Summary**: Give the counterpart to each of the following.

aluminum selenide magnesium phosphide

N2O4 NCl3

hydrochloric acid bromous acid

sulfur hexachloride dinitrogen monoxide

NaBr Rb2O

chromium(VI) sulfide mercury(II) oxide

KCH3COO Na2SO4

strontium fluoride potassium nitride

Hg2O FeBr3

SO2 P2S5

tin(II) nitride cobalt(III) iodide

CH3COOH (acid) HClO (acid)

FeCrO4 Zn(ClO3)2

HBr (acid) HBr (NOT acid)

cobalt(II) phosphate silver dichromate

gold(III) hydroxide ammonium carbonate

HClO (NOT acid) HNO3 (acid)

CoS TiCl4

chloric acid periodic acid

CaS AlF3

diboron trioxide arsenic pentafluoride

perchloric acid hyposulfurous acid