CHM151	Quiz #2a	<b>25 Pts</b>	<b>Fall 2004</b>	Name:

 $M = 10^6$ ,  $k = 10^3$ ,  $c = 10^{-2}$ ,  $m = 10^{-3}$ , 2.54 cm = 1 in, 12 in = 1 ft, 5280 ft = 1 mile

## Show All Work to Receive Credit.

(8 Pts). Complete the following table:

Element or ion name	Element or	Number of	Number of	Number of
	ion symbol	Protons	Electrons	Neutrons
phosphorous	P-31	15	15	16
Iron-56	si Fe	26	26	30
A sodium-23 cation	23Na+	11	10	12
An iodine-127 anion	127 I - 53 I	53	54	74

2. (6 Pts) Determine which ELEMENT OR ION in each pair has a larger volume and EXPLAIN YOU	ЛR
REASONING.	

- a. Kork+? Larger K Reason: K+ has one less e
- b. Mg or Cl? Larger Mg Reason: Same number of shells but Cl has more protons to pull on each e.
- c. Sor Te? Larger / E Reason: Te hAs 2 More shells.

## 3. (5 Pts) What volume of bromine (density = 2.928 g/mL at $20^{\circ}\text{C}$ ) is needed to provide 27.5 grams of bromine?

 $\frac{27.59}{2.9289} = 9.392 \text{ mL}$ 

- 4. (3 Pts) Describe what would happen on the electronic level in a chemical reaction between a metal and a nonmetal. The metal will Lose e (s) to the non metal.
- 5. (2 Pts) Give the name and symbol for:

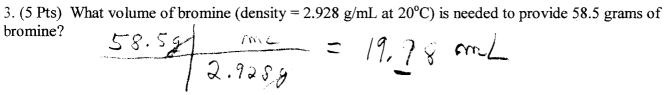
A metal \_\_\_\_\_ A non metal \_\_\_\_\_ \_\_

6. (1 Pt) How many inches are there in 48 centi milli inches?

48 & m in 10-2 10-3 = 48 × 10-5 in

CHM151 Quiz #2b 25	5 Pts Fall 2004	Name: Ke	ey .	
$M = 10^6$ , $k = 10^3$ , $c = 10^6$			~	ile
Show All Work to Rece	ive Credit.			
1. (8 Pts) Complete the	following table	· :		
Element or ion name	Element or ion symbol	Number of Protons	Number of Electrons	Number of Neutrons
phosphorous	P-31	15	15	16
ron-56	Fe	26	26	30
A potassium-40 cation	19K+	. 19	18	21
An iodine-129 anion	129 I - 53 I -	53	54	129-53= 76
2. (6 Pts) Determine which REASONING. a. Rb or Rb <sup>+</sup> ? Larger _		_	_	e and EXPLAIN YOUR
o. Al or Cl? Larger_				shells but Cl

2 _				,			
b. Al or Cl? Larger	AL	Reason:	) it is	ly t	100 m	1.8 s tone to	hells but Cl
c. Po or Te? Larger							"layer" of electrons.
				0			



- 4. (3 Pts) Describe what would happen on the electronic level in a chemical reaction between a metal and a non-metal. The metal would lose e (5) to the non-metal.
- 5. (2 Pts) Give the name and symbol for:

A non-metal \_\_\_\_\_ A metal \_\_\_\_\_ 6. (1 Pt) How many feet are there in 48 centi milli inches?  $\frac{48 \times 10^{-2} \times 10^{-3} \text{ in}}{12 \times 10^{-3}}$