Reading the Periodic Table Practice Packet

Key

Part 1: Directions: Answer the questions with the proper information using your notes, book, and the periodic table.

1. Define a group or family on the Periodic table.
   They have the same chemical properties/V.E.
2. What is a period on the Periodic table?
   # of energy levels
3. What is the symbol for the following elements.
   a. Magnesium Mg b. Potassium K
   c. Iron Fe d. Copper Cu
4. What are the names of the following elements.
   a. C Carbon b. Cl Chlorine
   c. Au Gold d. Sr Strontium
5. What period are the following elements in?
   a. He 1 b. Ge 4
   c. Rb 5 d. I 5
6. What group are the following elements?
   a. Sulfur 16 b. Ca 2
   c. Iodine 17 d. Fe 8
7. Write the name of an atom with the following characteristics.
   a. Halogen F, Cl, Br, I, At b. Malleable All metals
   c. Alkali metal Li, Na, K, Rb, Cs, Fr d. Brittle Solid non metals / metalloids
   e. Dull Non-metals f. Alkaline Earth metal Be, Mg, Ca, Sr, Ba, Ra
   g. Transition metal Groups 3-18 h. Nobel gas He, Ne, Ar, Kr, Xe, Rn
8. Name two elements that are liquid at room temperature.
   a. Mercury Hg b. Bromine Br

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Part 2: Directions: Use your Periodic table to complete the worksheet.

1. What is the atomic symbol for silver? Ag
2. What is the atomic mass of mercury? 201
3. Ni is the symbol for what element? Nickel
4. The element that has the atomic number 17 is. chlorine
5. List the symbols for two transition metals. Any in groups 3-12
6. Cu, Ag, and Au are all in what group number ? 11
7. Name two noble gases. He, Ne, Ar, Kr, Xe, Rn
8. Give the symbol for two halogens. F, Cl, Br, I, At
9. What is the symbol for element with atomic number 74? W
10. What is the atomic mass of copper? 64
11. What is the last element in period 4? Krypton

For questions 12 - 15, label the following Key box as it should appear on your periodic table

12. atomic number → 6
13. Symbol → C
14. Element → Carbon
15. Atomic mass → 12.01

Part 3: Directions: Use a Periodic table to find the information asked for below:

1. What is the ion charge of :
   Calcium +2
   Rubidium +1
   Nitrogen -3

3. How many valence electrons do the following have?
   Calcium 2
   Silicon 4
   ~~Copper~~ ____

4. How many electrons do the following have?
   Gold 79
   Iron 26
   Copper 29
   Uranium 92

5. Does mercury have more protons and electrons than tin? Yes

6. Is mercury a heavier element than tin? Heavier

7. Does potassium have more electrons than neon? Yes

8. Does hydrogen have more electrons than Uranium? No

9. Which has more protons, sulfur or iodine? Iodine

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10. Write the symbols or the names for each of these elements:
    Chlorine Cl
    Copper Cu
    Potassium K
    Silver Ag
    Na Sodium
    Sn Tin
    Zn Zinc
    Helium He
    Iron Fe
    P Phosphorus
    Ne Neon
    Mercury Hg

11. Name three elements that will readily lose two electrons to form a cation.
    a. Be, Ba
    b. Mg, Ra
    c. Ca, Sr

12. Name three elements that will readily gain one electron to form an anion.
    a. F, Cl, Br
    b. I, At
    c. ____

13. What charge will an ion have if it loses two electrons? +2

14. What charge will an ion have if it gains three electrons? -3

15. Name an element that may lose or gain four electrons. C, Si, Ge, Sn, Pb, Fl

16. Name the most reactive nonmetal. Bromine

17. Name a very reactive alkali metal. Francium, Cesium

18. Rank the reactivity of the following elements from most reactive to the least reactive.
    3 Bromine, 4 Iodine, 2 Chlorine, 1 Fluorine

19. Rank the reactivity of the following elements from the least reactive to the most reactive.
    4 Strontium, 2 Magnesium, 3 Calcium, 1 Beryllium

20. Rank the reactivity of the following elements from least reactive to most reactive.
    3 Barium, 2 Gallium, 1 Boron, 4 Cesium

Part 4: Directions: Use the periodic table to fill in this chart.

	Element	Symbol	Atomic Number	# of protons	# of electrons	Phase at room temperature	Rounded Atomic Mass	(show work) # of Neutrons	Classification
1	Oxygen	O	8	8	8	gas	16	16 - 8 = 8	nonmetal
2	Helium	He	2	2	2	gas	4	2	nonmetal
3	Carbon	C	6	6	6	solid	12	6	nonmetal
4	Aluminum	Al	13	13	13	solid	27	14	metal
5	Calcium	Ca	20	20	20	solid	40	20	metal
6	Sodium	Na	11	11	11	solid	23	12	metal
7	Potassium	K	19	19	19	solid	39	20	metal
8	Nitrogen	N	7	7	7	gas	14	7	nonmetal
9	Silicon	Si	14	14	14	solid	28	14	metalloid
10	Iron	Fe	26	26	26	solid	56	30	metal
11	Hydrogen	H	1	1	1	gas	1	0	nonmetal
12	Argon	Ar	18	18	18	gas	40	22	nonmetal