

Revision Sheets

Chapter 4- The Periodic Table

Part A- True/False

Indicate whether the statement is true or false.

- _____ 1. A metalloid is an element with all of the same properties as metals.
- _____ 2. Elements were arranged in order of increasing atomic mass on Mendeleev's first periodic table.
- _____ 3. Elements on the far right of the periodic table are classified as nonmetals.
- _____ 4. Copper is a metal and is a conductor of electricity.
- _____ 5. Ductility is not a property of metals
- _____ 6. Most metals are on the right side of the periodic table.

Part B- Multiple Choice

Identify the choice that best completes the statement or answers the question.

- _____ 7. The atomic number of calcium is 20. What can you tell about an atom of this element?
 - a. the sum of its protons and neutrons is 20
 - b. it has 20 protons
 - c. it has 40 protons
 - d. it has 20 neutrons
- _____ 8. The scientist best known for contributions to the development of the periodic table is _____.
 - a. Dmitri Mendeleev
 - b. Democritus
 - c. John Dalton
 - d. Albert Einstein
- _____ 9. A solid solution, such as sterling silver, is a(n) _____.
 - a. alloy
 - b. metalloid
 - c. colloid
 - d. emulsion
- _____ 10. Moving from left to right across the periodic table, how do the elements change?
 - a. They change from nonmetals to metalloids to metals.
 - b. They change from metals to metalloids to nonmetals.
 - c. They decrease in atomic number.
 - d. They are in alphabetic order.

- _____ 11. The sum of an atom's protons and neutrons is its _____.
 a. atomic mass c. atomic number
 b. periodic number d. atomic weight
- _____ 12. When Mendeleev published his periodic table, there were some spaces for undiscovered elements. The image below is a section of a similar table. A reasonable value for the atomic mass of the missing element is _____.

Al 27.0	Si 28.1	P 31.0
Ga 69.7	?	As 74.9
In 115	Sn 119	Sb 122

- a. 101
b. 72.3
- c. 68.2
d. 34.8
- ____ 13. Iodine is a solid nonmetal. What is one property of iodine?
- a. conductivity
b. dull appearance
- c. malleability
d. ductility
- ____ 14. The elements F, Cl, Br, I and At all appear in the same column of the periodic table and share many ____.
- a. atomic numbers
b. chemical formulas
- c. physical properties
d. chemical properties

Part C- Matching

Match each term with its correct description.

- a. atomic number
b. nonmetals
c. alkaline earth metals
d. group
- e. periodic table
f. alkali metals
g. metal
h. period
15. The number of protons in an atom of an element.
16. A chart that shows the elements in order of increasing atomic number.
17. Elements that have no metallic properties.
18. The elements that are in group 1 on the periodic table.
19. An element that is generally shiny and hard.
20. The rows on the periodic table.

- __ _ 21. The columns on the periodic table.
- __ _ 22. The elements that are in group 2 on the periodic table.

Part D- Short Answer

Write the correct answer for each of the following questions.

23. Describe five physical properties that can help to identify copper.
24. The _____ increases by one for each element as you move left to right across a period.
25. Classify each of the following elements as a metal, nonmetal, or a metalloid:
- | | |
|----------|-------|
| boron | _____ |
| carbon | _____ |
| aluminum | _____ |
| silicon | _____ |
26. An element that is sometimes a good conductor of electricity and sometimes a good insulator is a(n) _____.
27. An element that is a poor conductor of heat and electricity, but is a good insulator is a(n) _____.
28. What are two properties that make a metal a good choice for use as wires in electronics?