



# Properties of Atoms and the Periodic Table

## Part A. Vocabulary Review

**Directions:** On the space at the left, write the term that correctly completes each statement. Use each term once.

metals

groups

electrons

chemical symbol

isotopes

metalloids

nucleus

average atomic mass

transition elements

mass number

quarks

electron cloud

atomic number

periods

periodic table

chemical symbol

1. A capital letter or a combination of a capital letter and a small letter that is used to represent an element is called a(n) \_\_\_\_\_.

periods

2. The horizontal rows of elements are called \_\_\_\_\_.

average atomic mass

3. An average of the masses of all the isotopes that occur in nature for an element is the \_\_\_\_\_.

groups

4. Vertical columns of elements are called \_\_\_\_\_.

transition elements

5. Elements in the middle of the periodic table, groups 4 through 7, are called the \_\_\_\_\_.

atomic number

6. The number of protons in an atom is the \_\_\_\_\_.

quarks

7. Protons and neutrons can be subdivided into \_\_\_\_\_ by colliding them.

nucleus

8. The center of an atom where protons and neutrons are located is the \_\_\_\_\_.

mass number

9. A total count of the neutrons and protons in an atom is the \_\_\_\_\_.

isotopes

10. Atoms of the same element but with different numbers of neutrons are \_\_\_\_\_.

metals

11. Elements that are found on the left side of the periodic table are \_\_\_\_\_.

metalloids

12. Elements that have some properties of both metals and nonmetals are \_\_\_\_\_.

electrons

13. The particles that move about the nucleus and have a negative charge are \_\_\_\_\_.

electron cloud

14. The region around the nucleus occupied by electrons is a(n) \_\_\_\_\_.

periodic table

15. A chart that shows the classification of elements is called the \_\_\_\_\_.

// 15. What is the atomic number of sodium?

14. What is the average atomic mass of iron?

13. In which group is gold?

12. Which element is a metal, B or C?

11. Which element has a greater atomic mass, A or B?

8

**Directions:** Refer to the periodic table below and the boxes at the right of the table to answer questions 11–15.

Element	Chemical symbol	Atomic number	Number of protons	Number of neutrons	Mass number
1. Sodium	Na	11	11	12	23
2. Carbon	C	6	6	6	12
3.	Fe	26	26	30	56
4. Sulfur	S	16	16	16	32
5. Nitrogen	N	7	7	7	14
6. Oxygen	O	8	8	8	16
7.	He	2	2	2	4
8. Chlorine-35	Cl	17	17	18	35
9. Copper	Cu	29	29	35	64
10. Chlorine-37	Cl	17	17	17	37

**Directions:** Complete the table below by writing the correct information in the blank spaces.

Part B. Concept Review

Chapter Review (continued)