

PERIODIC TRENDS & ATOMIC STRUCTURE PRACTICE

In your notebooks, answer the following questions in complete sentences. Restate the question in your answer.

1. In your own words, explain how mass number is different from atomic mass.

2. What is the atomic number and mass number of the following atoms?
A. An atom with 4 protons, 5 neutrons, 4 electrons

Atomic number: _____ Mass number: _____

- B. An atom with 7 protons, 7 neutrons, 7 electrons

Atomic number: _____ Mass number: _____

- C. An atom with 11 protons, 12 neutrons, 10 electrons

Atomic number: _____ Mass number: _____

3. In your own words, define an isotope.

4. Using your periodic table, fill in the table below.

Element	Symbol	No. Protons	No. Neutrons	No. Electrons	Atomic No.	Mass No.
Zinc						
Oxygen						
Barium						
Sodium						

5. Let's say you have 3 atoms of nitrogen arranged in front of you. What is the one thing that they must all have in common?

6. An atom of carbon typically has 6 protons, 6 neutrons, and 6 electrons.

A. Would changing the number of electrons change the mass number? Explain.

B. Would changing the number of protons affect the element's identity, mass number, or both?

C. Would changing the number of neutrons affect the element's identity, mass number, or both?

D. Give an example of how many protons and how many neutrons an isotope of carbon could have.

7. Are the following elements metals, nonmetals, or metalloids?

A. argon _____

B. lithium _____

C. arsenic _____

D. hydrogen _____

E. aluminum _____

8. What period # and group # are the following elements in?

A. phosphorus _____

B. calcium _____

C. neon _____