

Review and Reinforce

Ch 3.1

Introduction to Atoms

Understanding Main Ideas

Answer the following questions on a separate sheet of paper.

1. What three particles are found in an atom?
2. Which two particles are found in an atom's nucleus?
3. Explain why scientists use models to study atoms.
4. Which two particles in an atom are equal in number?
5. How are elements identified in terms of their atoms?
6. What two particles account for almost all of the mass of an atom?

Building Vocabulary

Fill in the blank to complete each statement.

7. The _____ is the very small, dense center of an atom.
8. The positively charged particle of an atom is called a(n) _____.
9. A particle with no charge is a(n) _____.
10. A(n) _____ is the particle of an atom that moves rapidly in the cloudlike region around the nucleus.
11. The _____ tells the number of protons in the nucleus of every atom of an element.
12. Atoms of the same element that have the same number of protons but different numbers of neutrons are called _____.
13. The sum of protons and neutrons in the nucleus of an atom is the _____.
14. Scientists will often use a(n) _____, an object that helps explain ideas about the natural world.

Lesson Quiz

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Introduction to Atoms

Write the letter of the correct answer on the line at the left.

1. ____ The positively charged particle in an atom's nucleus is the
A electron
B neutron
C proton
D isotope
2. ____ An element's identity can be determined from its
A atomic number
B number of neutrons
C number of isotopes
D energy levels
3. ____ The smallest particle an element can be divided into is the
A electron
B neutron
C isotope
D atom
4. ____ The model of the atom that described electrons scattered throughout a ball of positive charge was proposed by
A Niels Bohr
B Ernest Rutherford
C J. J. Thomson
D John Dalton

If the statement is true, write *true*. If the statement is false, change the underlined word or words to make the statement true.

5. ____ An element's mass number tells the number of protons in its nucleus.
6. ____ Negatively charged particles in an atom are called electrons.
7. ____ The cloud model of the atom describes the location of electrons as specific orbits around the nucleus.
8. ____ Atoms with the same number of protons but different numbers of neutrons are called isomers.
9. ____ The sum of the protons and neutrons in an atom is called the atomic number.
10. ____ An object that helps explain ideas about the natural world is called a model.