

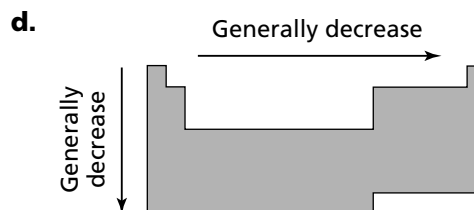
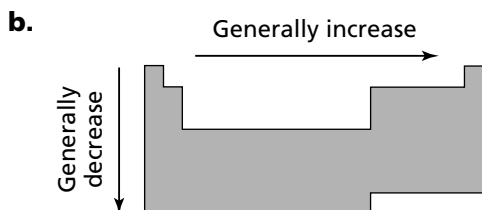
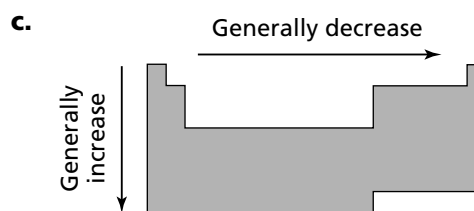
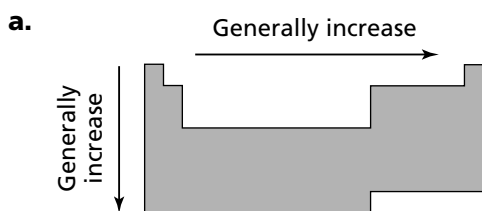
Section 6.3 Periodic Trends

In your textbook, read about atomic radius and ionic radius.

Circle the letter of the choice that best completes the statement or answers the question.

1. Atomic radii cannot be measured directly because the electron cloud surrounding the nucleus does not have a clearly defined
- a. charge. b. mass. c. outer edge. d. probability.

2. Which diagram best represents the group and period trends in atomic radii in the periodic table?

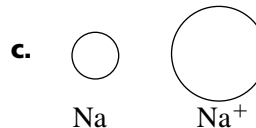
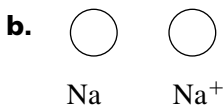
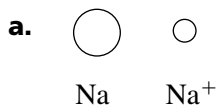


3. The general trend in the radius of an atom moving down a group is partially accounted for by the
- a. decrease in the mass of the nucleus. c. increase in the charge of the nucleus.
 b. fewer number of filled orbitals. d. shielding of the outer electrons by inner electrons.

4. A(n) _____ is an atom, or bonded group of atoms, that has a positive or negative charge.
- a. halogen b. ion c. isotope d. molecule

5. An atom becomes negatively charged by
- a. gaining an electron. b. gaining a proton. c. losing an electron. d. losing a neutron.

6. Which diagram best represents the relationship between the diameter of a sodium atom and the diameter of a positive sodium ion?



Section 6.3 *continued*

In your textbook, read about ionization energy and electronegativity.

Answer the following questions.

7. What is ionization energy?

8. Explain why an atom with a high ionization-energy value is not likely to form a positive ion.

9. What is the period trend in the first ionization energies? Why?

10. What is the group trend in the first ionization energies? Why?

11. State the octet rule.

12. What does the electronegativity of an element indicate?

13. What are the period and group trends in electronegativities?
