

Chapter Review *continued*

- _____ 9. Which of the following statements about alkali metals is true?
- Alkali metals are generally found in their uncombined form.
 - Alkali metals are Group 1 elements.
 - Alkali metals should be stored underwater.
 - Alkali metals are unreactive.
- _____ 10. Which of the following statements about elements is true?
- Every element occurs naturally.
 - All elements are found in their uncombined form in nature.
 - Each element has a unique atomic number.
 - All of the elements exist in approximately equal quantities.

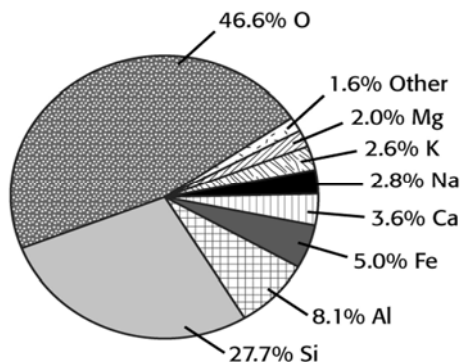
Short Answer

11. How is Moseley’s basis for arranging the elements different from Mendeleev’s?

12. How is the periodic table like a calendar?

Math Skills

Examine the chart of the percentages of elements in the Earth’s crust below. Then, answer the questions that follow.



13. Excluding the “Other” category, what percentage of the Earth’s crust are alkalimetals?

14. Excluding the “Other” category, what percentage of the Earth’s crust are alkaline-earth metals?

Name _____ Class _____ Date _____

Chapter Review *continued*

CRITICAL THINKING

15 . **Concept Mapping** Use the following terms to create a concept map: *periodic table, elements, groups, periods, metals, nonmetals, and metalloids.*

Chapter Review *continued*

16. **Forming Hypotheses** Why was Mendeleev unable to make any predictions about the noble gas elements?

17. **Identifying Relationships** When an element that has 115 protons in its nucleus is synthesized, will it be a metal, a nonmetal, or a metalloid? Explain your answer.

18. **Applying Concepts** Your classmate offers to give you a piece of sodium that he found on a hiking trip. What is your response? Explain.

19. **Applying Concepts** Identify each element described below.

- a. This metal is very reactive, has properties similar to those of magnesium, and is in the same period as bromine.

- b. This nonmetal is in the same group as lead.

Chapter Review *continued*

INTERPRETING GRAPHICS

20. Study the diagram below to determine the pattern of the images. Predict the missing image, and draw it. Identify which properties are periodic and which properties are shared within a group.

