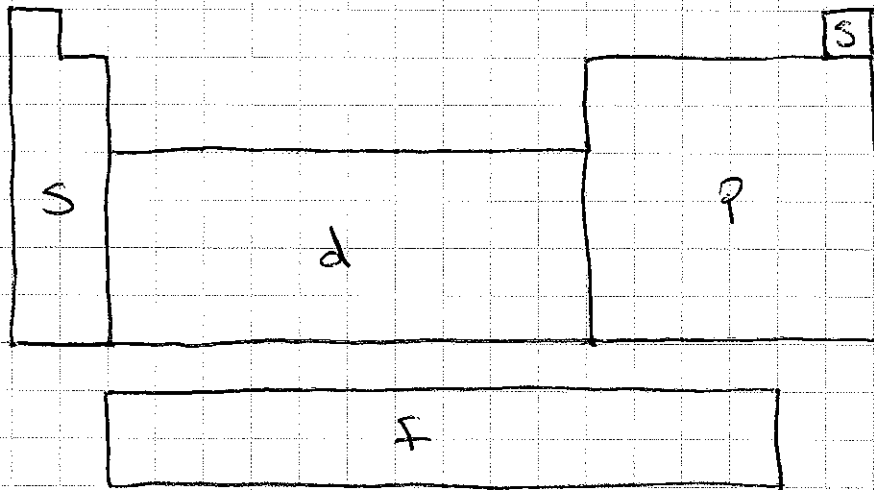


① their valence electrons have similar configurations

②



③

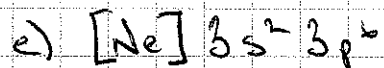
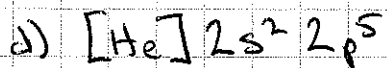
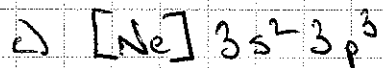
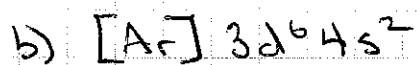
left

- all solids
- good conductors
- shiny, malleable, ductile

right

- gases, liquids, and solids
- poor conductors
- not shiny, not malleable, not ductile

④

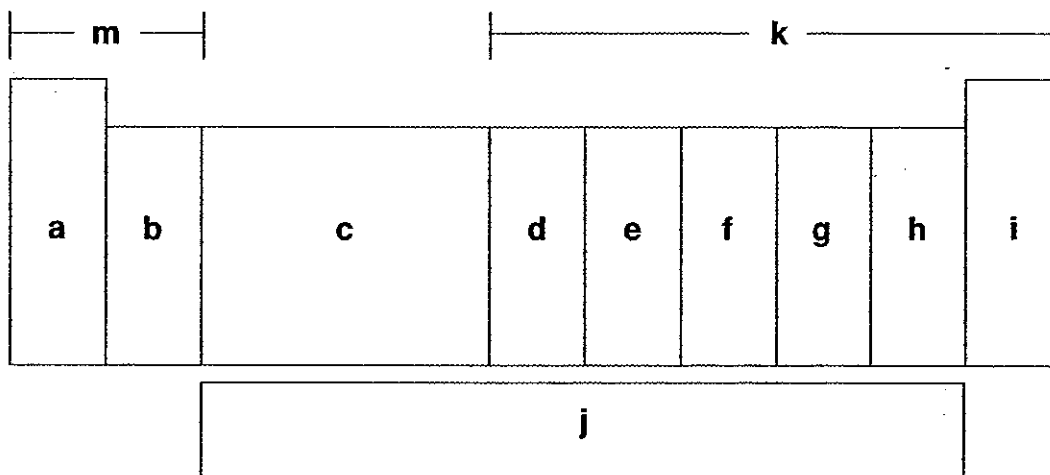


5-2 Review and Reinforcement

Reading the Periodic Table

On the line at the left, write the letter of the appropriate location of each group of elements on the periodic table below. Some letters will be used more than once.

- | | | | |
|----------|---------------------------------------|-------------|---|
| <u>e</u> | 1. carbon family | <u>j</u> | 8. f-block elements |
| <u>b</u> | 2. alkaline earth metals | <u>i</u> | 9. noble gases |
| <u>h</u> | 3. inner transition metals | <u>d-i</u> | 10. p-block elements |
| <u>c</u> | 4. halogens | <u>f</u> | 11. nitrogen family |
| <u>g</u> | 5. d-block elements | <u>a, b</u> | 12. s-block elements |
| <u>a</u> | 6. oxygen group | <u>c</u> | 13. transition metals |
| | 7. alkali metals | | 14. group of one semimetal and four metals |



Use the skills you developed in Section 5-2 to answer each of the following questions.

Below is the abbreviated electron configuration for sodium. Explain each part of this configuration in the space provided.

- [Ne] 3s¹
- 15. closest noble gas before the element
 - 16. energy level
 - 17. 1 electron in this orbital
 - 18. sublevel

5-2 Review and Reinforcement (continued)

Identify each of the following elements as a metal (M), nonmetal (NM), or semimetal (SM).

- | | |
|--------------|--------------|
| <u> M </u> | 19. sodium |
| <u> SM </u> | 20. silicon |
| <u> NM </u> | 21. neon |
| <u> M </u> | 22. calcium |
| <u> NM </u> | 23. nitrogen |

Write the family names that have been given to each of the following groups.

- | | |
|--------------|-----------------------|
| 24. Group 1A | alkali metals |
| 25. Group 2A | alkaline earth metals |
| 26. Group 7A | halogens |
| 27. Group 8A | noble gases |

Answer each of the following questions in the space provided.

~~28. What information is contained in each of the 109 squares on the periodic table?~~

~~29. What properties distinguish metals from nonmetals?~~

~~30. What is an electron configuration, and what does it tell you about an element?~~
