**Pg 64 #4-21 Solutions**

4. (a) 2

(b) 8

(c) 26

(d) 79

(e) 92

(f) 101

5. An atom of potassium

6. Atomic mass is the mass of an atom of an element.

7. Atomic mass units

8. Atomic mass generally increases from left to right and from top to bottom through the table.

9. (a) 6.9 amu

(b) 28.1 amu

(c) 55.8 amu

(d) 63.5 amu

(e) 200.6 amu

10. Lead

11. Ion charge is an electric charge that forms on an atom when it gains or loses electrons.

12. An electron

13. (a) Positive

(b) Negative

14. These elements do not form ions.

15. The element is capable of forming an ion in more than one way.

16. (a) 2+, 3+, and 4+

(b) 2+

17. Metals, non-metals, and metalloids

18. (a) Alkali metals, alkaline earth metals, halogens, and noble gases

(b) Alkali metals and alkaline earth metals

(c) Halogens and noble gases

19. Any five of boron, silicon, germanium, arsenic, antimony, tellurium, polonium, and astatine

20. Periods

21. Families or groups