

5**ELECTRONS IN ATOMS****Practice Problems**

In your notebook, solve the following problems.

SECTION 5.1 MODELS OF THE ATOM

1. How many sublevels are in the following principal energy levels?

a. $n = 1$

c. $n = 3$

e. $n = 5$

b. $n = 2$

d. $n = 4$

f. $n = 6$

2. How many orbitals are in the following sublevels?

a. $1s$ sublevel

d. $4f$ sublevel

g. fifth principal energy level

b. $5s$ sublevel

e. $7s$ sublevel

h. $6d$ sublevel

c. $4d$ sublevel

f. $3p$ sublevel

3. What are the types of sublevels and number of orbitals in the following energy levels?

a. $n = 1$

c. $n = 3$

e. $n = 5$

b. $n = 2$

d. $n = 4$

SECTION 5.2 ELECTRON ARRANGEMENT IN ATOMS

1. For each of the following elements listed below, provide 1) the full electron configuration, 2) the entire orbital diagram, 3) the quantum number for the final electron occupying the element's configuration, and 4) Lewis dot diagram.

a. hydrogen

d. barium

g. krypton

b. vanadium

e. bromine

h. arsenic

c. magnesium

f. sulfur

i. radon