

VALENCE ELECTRONS

Valence electrons are defined as the electrons that are in the outermost energy level.

1. Answer the following:
 - a. What is the electron configuration of carbon?
 - b. What is the highest energy level of carbon's electrons?
 - c. How many electrons are in that energy level? (The answer to this question is the number of valence electrons for carbon.)
2. Using the same process as in question 1, determine the number of valence electrons in silicon, germanium, and tin.
 - a. How many valence electrons do each of those have?
 - b. Is there a pattern you noticed? What is the pattern?

3. Determine the number of valence electrons in calcium.
 - a. How many valence electrons are in calcium?

 - b. What is your prediction of how many valence electrons the other elements in calcium's group are?

4. Determine the number of valence electrons in each group on the periodic table. Write each of them here.