Mr. Skerrett SCH 4C

Lewis Dot Diagrams

Lewis dot diagrams are much easier to draw than Bohr-Rutherford diagrams. Since only the _____ electrons are involved in the formation of ions. Gilbert Lewis suggested that we simply represent an atom by its symbol and a set of dots around the symbol to indicate the valence electrons.

4 rules for drawing Lewis Dot Diagrams

1. The core is represented by the symbol for the element: valence electrons are represented by dots.
2. The symbol is assumed to have four sides and the valence electrons are distributed around the sides.
3. When we distribute valence electrons, we first place one dot on each of the four sides before we locate pairs of electrons on any one side.
4. No more than 2 electrons can be placed on any one side.

Using the rules above draw Lewis Dot Diagrams for the following neutral atoms.

Goup 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7	Group 8
H							He
Li	Be	B	C	N	O	F	Ne
Na	Mg	Al	Si	P	S	Cl	Ar
K	Ca						

Atoms in Group 1 have _____ valence electrons.
Atoms in Group 7 have _____ valence electrons.

The number of valence electrons shown in a Lewis Dot Diagram for a neutral atom is _____ to its _____ number.