

# Valence Electrons, Octet Rule, Dot Structure Notes

Write the Electron configurations for the following atoms and ions:

Mg

O<sup>2-</sup>

Ga

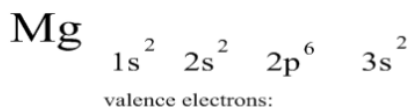
Sr<sup>2+</sup>

## Valence Electrons –

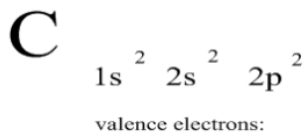
Which *sublevels* contain the **valence electrons**?

**Lewis Dot Diagrams** -Show the valence electrons

- 1: Write the element symbol
- 2: Determine the number of valence electrons
- 3: Fill according to Aufbau's and Hund's Rule



Mg



C

**Octet Rule:** Every element wants 8 electrons in its valence shell!



What does Magnesium need to do in order to complete its valence shell?

What does Nitrogen need to do in order to complete its valence shell?

*Weirdoes to the octet rule: H, He, Li, Be, B, and C*

Why are H, He, Li, Be, and B weird?

Why is carbon weird?

Be

C

*Ions*

N

If an atom gains electrons to get a full octet....it will have more electrons than protons and therefore an overall NEGATIVE charge

Also called an \_\_\_\_\_

Mg

If an atom loses electrons to get a full octet....it will have more protons than electrons and therefore an overall POSITIVE charge

Also called a \_\_\_\_\_