

Unit 2: Ch 5.2-5.3 – Electron Configurations #3: Noble Gas Notation

REVIEW: ORBITALS

- Each _____ has _____ containing _____.
 - In **ANY** _____ orbital = _____ maximum.
- Number of _____ in a _____ is _____ to the number of _____ of electrons within that sublevel.
 - “ s “ sublevel → _____ orbital → _____ electron pair → _____ electrons max
 - “ p “ sublevel → _____ orbitals → _____ electron pairs → _____ electrons max
 - “ d “ sublevel → _____ orbitals → _____ electron pairs → _____ electrons max
 - “ f “ sublevel → _____ orbitals → _____ electron pairs → _____ electrons max

Electron Configurations: PERIODIC TABLE

- The periodic table organizes _____ and _____ into _____.
 - **Period** -
 - **Groups/Families** -

BOHR MODEL to Electron Configurations:

- **DEFINITION** -
- Ex: Oxygen (O) → e⁻ config (longhand): _____
- Ex: Neon (Ne) → e⁻ config (longhand): _____
- Ex: Titanium (Ti) → e⁻ config (longhand): _____
- Ex: Rubidium (Rb) → e⁻ config (longhand): _____

VALENCE ELECTRONS:

➤ DEFINITION -

- Valence electrons _____ determine _____ of atoms.

➤ Identity of Valence Electrons:

- Ex: Cobalt (Co) → e⁻ config (longhand): _____
 - **IDENTITY** of valence e⁻ : _____ **NUMBER** of valence e⁻ : _____
- Ex: Oxygen (O) → e⁻ config (longhand): _____
 - **IDENTITY** of valence e⁻ : _____ **NUMBER** of valence e⁻ : _____
- Ex: Yttrium (Y) → e⁻ config (longhand): _____
 - **IDENTITY** of valence e⁻ : _____ **NUMBER** of valence e⁻ : _____

PUTTING IT ALL TOGETHER: NOBLE GAS NOTATION

➤ 1)

➤ 2)

- Must follow the _____ rules for _____ elements as well.
- Ex: Fluorine (F) = _____ e⁻ config (longhand): _____
 - Orbital Notation:
 - Noble Gas Notation: _____ Identity / # valence e⁻ :
- Ex: Nickel (Ni) = _____ e⁻ config (longhand): _____
 - Orbital Notation:
 - Noble Gas Notation: _____ Identity / # valence e⁻ :
- Ex: Bismuth (Bi) = _____ Noble Gas Notation: _____
 - Identity / # valence e⁻ :