

Unit 3: Ch 6.3 – Periodic Trends

1) ATOMIC RADIUS:

➤ DEFINITION:

➤ GROUP Trend –

○ TREND:

- **WHY? →**

- PRACTICE: Order in **DECREASING** atomic radius (AR) → N, Fr, Pd → _____

➤ PERIOD Trend –

○ TREND:

- **WHY? →**

- **What Does Z_{eff} Mean? →** _____ number of _____ inside nucleus _____ outermost electrons (val e^-) _____ to nucleus.

- PRACTICE: Order in **INCREASING** atomic radius (AR) → Ti, Ne, Se → _____

➤ Atomic Radius (NEUTRAL) vs Ionic Radius (CHARGED):

- METALS = _____ NONMETALS = _____

- Larger AR? **K vs K^+** Larger AR? **O vs O^{2-}**

- **WHY?** **WHY?**

2) IONIZATION ENERGY:

➤ DEFINITION:

➤ GROUP Trend –

○ TREND:

- **WHY? →**

- PRACTICE: Order in **INCREASING** ionization energy (IE) → Pd, Hg, Sc → _____

➤ PERIOD Trend –

○ TREND:

▪ **WHY?** →

○ PRACTICE: Order in **DECREASING** ionization energy (IE) → Ni, Ag, Zn → _____

3) ELECTRONEGATIVITY:

➤ DEFINITION:

➤ GROUP Trend –

○ TREND:

▪ **WHY?** →

○ PRACTICE: Order in **INCREASING** electronegativity (EN) → F, Fr, Sn → _____

➤ PERIOD Trend –

○ TREND:

▪ **WHY?** →

○ PRACTICE: Order in **DECREASING** electronegativity (EN) → Y, S, Sb → _____

PERIODIC TRENDS PRACTICE:

1. Order in **INCREASING** atomic radius (AR) → Zr, Ra, Ni → _____

2. Order in **DECREASING** atomic radius (AR) → W, Co, Cs → _____

3. Order in **DECREASING** ionization energy (IE) → Al, Nb, B → _____

4. Order in **INCREASING** ionization energy (IE) → Mn, Cu, Cs → _____

5. Order in **DECREASING** electronegativity (EN) → Cd, O, Se → _____

6. Order in **INCREASING** electronegativity (EN) → As, V, Ba → _____