CONCEPT: PERIODIC TREND: ELECTRON AFFINITY (SIMPLIFIED)

● **Electron Affinity (EA)**: Energy *released* from the addition of an electron to a gaseous atom or ion in _____.

C (g) + _____ → _____ + **Energy**

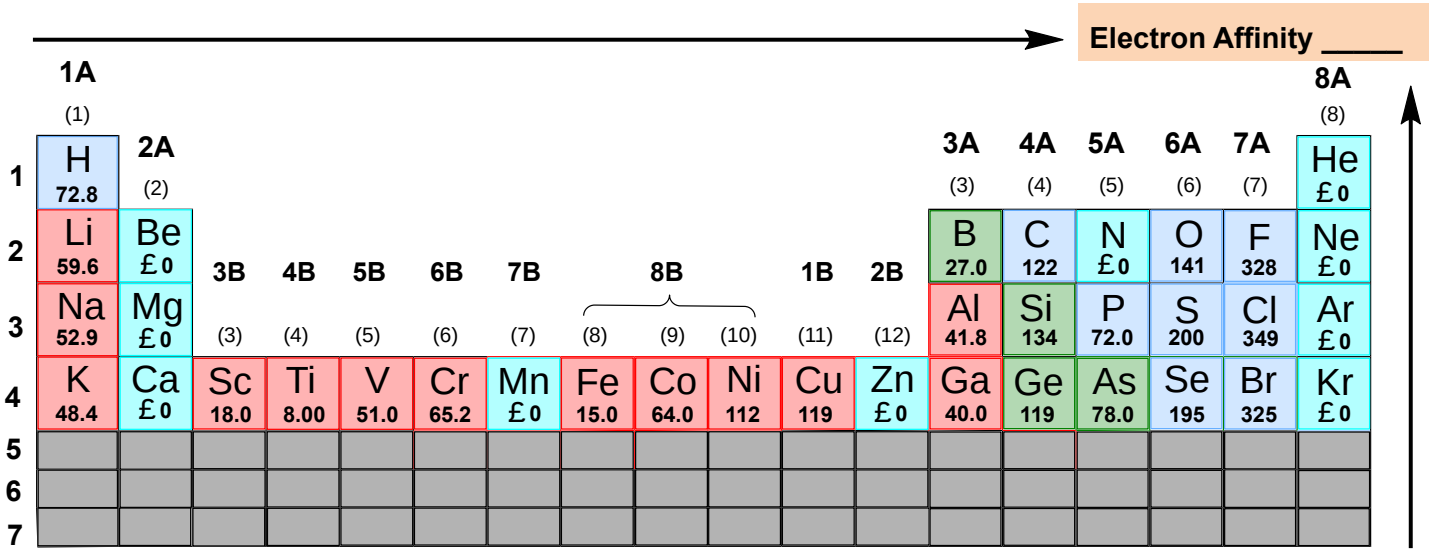
□ **Exceptions:** Electron affinity ____ means the element will not readily accept an electron.

- **Reason:** Uniquely stable electron configurations (arrangements).

□ **Periodic Trend:** Electron affinity _____ moving from left to right across a period and going up a group.

□ _____ EA: Electron not easily accepted

□ _____ EA: Electron is easily accepted.



EXAMPLE: Which of the following halogens will release the most energy with the addition of an electron?

a) S b) Ne c) N d) At e) Br

PRACTICE: Determine which atom in the following set has the largest electron affinity: N, O, C, B, Ne

a) N b) O c) C d) B e) Ne

CONCEPT: PERIODIC TREND: ELECTRON AFFINITY (SIMPLIFIED)

PRACTICE: Rank the following elements in order of increasing electron affinity: Cs, Hg, F, S

PRACTICE: Which one of the following atoms has the least tendency to gain another electron?

a) Neon b) Oxygen c) Chlorine d) Sodium e) Hydrogen

PRACTICE: Arrange the following elements from greatest to least tendency to accept an electron: F, Li, C, O, Be