CONCEPT: LEWIS DOT STRUCTURES: IONS (SIMPLIFIED)

- In Lewis Dot Structures, cations have ____ valence electrons and anions have ____ valence electrons.

EXAMPLE: Draw the Lewis Dot Structure for the following anion: BCl_4^-.

STEP 1: Determine the total number of valence electrons of the structure.

□ Recall, Valence Electrons = _____ of the element.

STEP 2: Place the _____ electronegative element in the center and connect all elements with single bonds.

□ Follow Bonding Preferences guide to determine atom connectivity.

STEP 3: Add electrons to all the _____ elements until they have 8 electrons (Octet Rule).

□ **Duet Rule**: Hydrogen only wants _____ electrons around it.

STEP 4: Place any remaining electrons on the central atom.

STEP 5: Place the ion in brackets and its charge in the top right corner.

□ For cations, remove valence electrons from the _____ element.

PRACTICE: Draw the Lewis Dot Structure for the following cation: NH_4^+.

CONCEPT: LEWIS DOT STRUCTURES: IONS (SIMPLIFIED)

PRACTICE: Determine the Lewis Dot Structure for the following ion: O_2^{2-}.

PRACTICE: Determine the Lewis Dot Structure for the following ion: SCl_4^{2+}.

PRACTICE: Draw the Lewis Dot Structure for the following ion: PCl_4^{+}.