CONCEPT: LEWIS DOT STRUCTURES: NEUTRAL COMPOUNDS (SIMPLIFIED)

- **Lewis Dot Structures** are structural representations of elements that use _____ electrons to form their covalent bonds.
  - □ Many possible Lewis Dot Structures exist, but there are rules to draw the best structure.
  - □ Recall, elements form bonds in order to _____ electrons and become like the nearest noble gas.

EXAMPLE: Draw the Lewis Dot Structure for the silicon tetrabromide molecule, $SiBr_4$.

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.

PRACTICE: Determine the Lewis Dot Structure for the NH_3 compound.

PRACTICE: Determine the Lewis Dot Structure for the following compound: H_2Se.

PRACTICE: Draw a Lewis Dot Structure that obeys the octet rule for the following compound: NH_2OH.