

LEWIS DOT DIAGRAMS

Name _____

Lewis diagrams are a way to indicate the number of valence electrons around an atom.

$\text{Na}\cdot$, $\cdot\ddot{\text{Cl}}\cdot$, $\cdot\ddot{\text{N}}\cdot$
are all examples of
this type of diagram.

Draw Lewis dot diagrams of the following atoms.

1. calcium

6. carbon

2. potassium

7. helium

3. argon

8. oxygen

4. aluminum

9. phosphorus

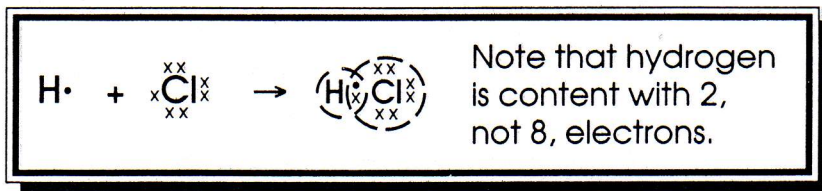
5. bromine

10. hydrogen

COVALENT BONDING

Name _____

Covalent bonding occurs when two or more nonmetals share electrons, attempting to attain a stable octet of electrons at least part of the time. For example:



Show how covalent bonding occurs in each of the following pairs of atoms. Atoms may share one, two or three pairs of electrons.

1. H + H (H ₂)
2. F + F (F ₂)
3. O + O (O ₂)
4. N + N (N ₂)
5. C + O (CO ₂)
6. H + O (H ₂ O)

SHAPES OF MOLECULES

Name _____

Using VSEPR Theory, name and sketch the shape of the following molecules.

1. N_2	7. HF
2. H_2O	8. CH_3OH
3. CO_2	9. H_2S
4. NH_3	10. I_2
5. CH_4	11. $CHCl_3$
6. SO_3	12. O_2

Name: _____ Block: _____

Lewis Structures

Please use the rules learned in class to draw the following Lewis Structures.

1) BSF

2) HBr

3) C₂H₅OH (ethanol)

4) N₂F₄

5) SF₆

6) PBr₃

7) N₂H₂

8) CH₃OH

9) NO₂⁻¹

10) C₂H₄