

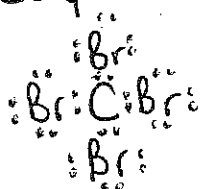
Station 6:

Shapes of molecules help to determine properties of molecules. For each of the following covalently bonded substances;

- Write down the molecular formula.
- Draw the Lewis dot diagram.
- Determine the molecular shape (write the name of the shape and draw a sketch of the shape).
- Determine if the molecule is polar or nonpolar.
- (Honors) Determine the hybridization of the central atom.

1. Carbon tetrabromide
2. Dinitrogen monoxide
3. Sulfur dichloride
4. Nitrogen (N_2)
5. Phosphorus trifluoride

1. CBr_4

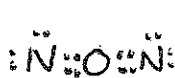


tetrahedral



nonpolar
 sp^3

2. N_2O



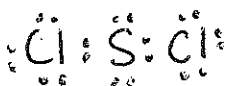
linear



nonpolar

sp

3. SCl_2



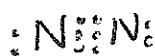
bent



polar

sp^3

4. N_2



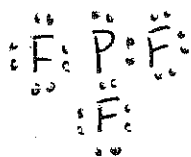
linear



nonpolar

sp

5. PF_3



trigonal pyramidal



sp^3

polar