

Honors Chemistry: Bonding 4-6 Problem Set- Lewis Structures

Directions: For each of the following determine the bond type, draw the Lewis structure, calculate the formal charge on *each* atom, and determine the shape, bond angle, and polarity.

1) Methane (CH₄)

6) Ammonium

2) Ammonia

7) Hydronium

3) Carbon tetrachloride

8) Nitrogen trifluoride

4) Phosphorus trichloride

9) Aluminum tetrachloride (-1 anion)

5) Carbon dioxide

10) Phosphorus pentachloride