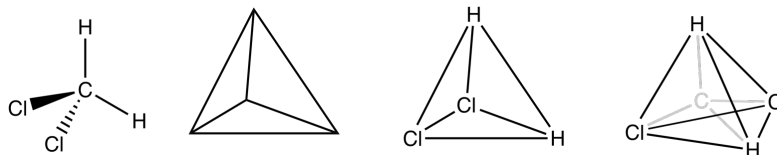


Exercise 05Name: _____ **Key** _____Consider the molecule CH_2Cl_2 .

- (a) Is CH_2Cl_2 a polar or nonpolar molecule?
- (b) Draw the Lewis structure.
- (c) What is the shape and hybridization of the C atom in CH_2Cl_2 ?
-

(a) **Polar** because the bond dipoles do not cancel out completely.

(b) Lewis structure:



(c) Because the carbon has a steric number $\text{SN} = 4$ and no lone pairs the geometry is **tetrahedral**. The hybridization of the carbon atom is **sp^3** .