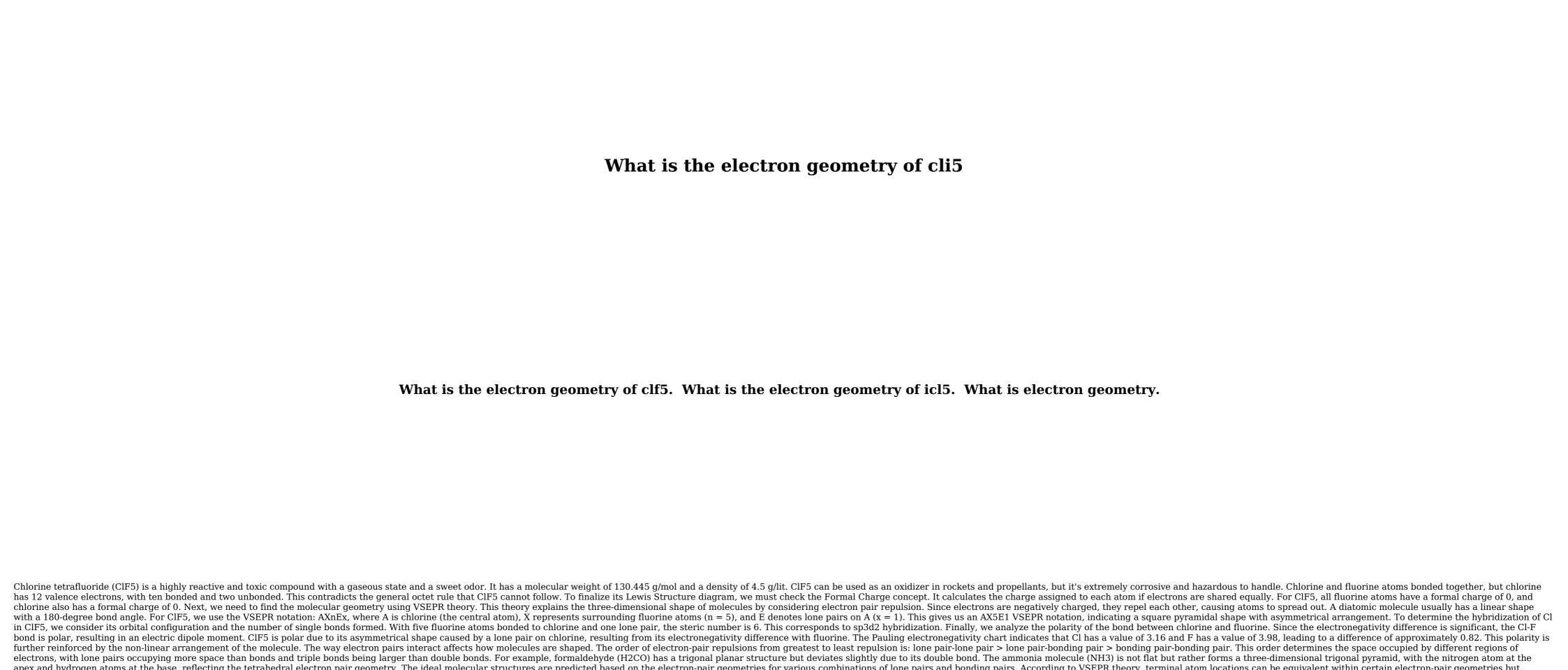
I'm human







apex and hydrogen atoms at the base, reflecting the tetrahedral electron pair geometries for various combinations of lone pairs and bonding pairs. According to VSEPR theory, terminal atom locations can be equivalent within certain electron-pair geometries but become distinct in others, such as trigonal bipyramidal geometries where lone pairs occupy equatorial positions due to having more space available. In the case of the CIF3 molecule, there are three possible arrangements for its bonds and two lone pairs. The stable structure is the one that places lone pairs in equatorial locations, resulting in a T-shaped molecular arrangement. In trigonal bipyramids, axial positions are directly across from each other, while equatorial positions form an equilateral triangle. For CIF3, the observed T-shaped molecular structure is consistent with larger lone pairs occupying equatorial positions. When a central atom has two lone electron pairs and four bonding

regions, octahedral electron-pair geometry occurs, with lone pairs on opposite sides of an imaginary octahedron, resulting in a square planar molecular structure.