

Molecular Geometry Quiz

Complete the table below.

Total # of Electron Density Regions	Name of Shape	Bond Angle
4		
	Trigonal Planar	
		180°

1. What does the VSEPR theory state and what does VSEPR stand for?
2. According to VSEPR theory, molecules adjust their shapes to keep which of the following as far apart as possible?
 - a. Pairs of valence electrons
 - b. Inner shell electrons
 - c. Mobile electrons
 - d. The electrons closest to the nuclei
3. What causes water molecules to have a bent shape, according to VSEPR theory?
4. Carbon dioxide (CO₂) and water (H₂O) both have two atoms attached to the central atom. Explain why carbon dioxide's shape is linear, while water's shape is bent?
5. Draw the lewis structure and geometric shape for BF₃ and explain why it has the geometry it does.

1. Draw the lewis structures of each of the following molecules and determine the molecular geometries of the following molecules:

a. H_2Se

b. BrF_3

c. SCl_4