

VSEPR Molecular Geometry — Practice Worksheet

Name: _____ Date: _____

Instructions: Show your reasoning, units, electron counts, or diagrams as needed. Use a separate sheet for additional work. For numeric results, use appropriate significant figures.

1. For CO₂, identify electron-group geometry, molecular geometry, central lone-pair count, and approximate bond angle(s).

2. For BF₃, identify electron-group geometry, molecular geometry, central lone-pair count, and approximate bond angle(s).

3. For CH₄, identify electron-group geometry, molecular geometry, central lone-pair count, and approximate bond angle(s).

4. For NH₃, identify electron-group geometry, molecular geometry, central lone-pair count, and approximate bond angle(s).

5. For H₂O, identify electron-group geometry, molecular geometry, central lone-pair count, and approximate bond angle(s).

6. For PCl₅, identify electron-group geometry, molecular geometry, central lone-pair count, and approximate bond angle(s).

7. For SF₆, identify electron-group geometry, molecular geometry, central lone-pair count, and approximate bond angle(s).

8. For SF₄, identify electron-group geometry, molecular geometry, central lone-pair count, and approximate bond angle(s).

9. For ClF₃, identify electron-group geometry, molecular geometry, central lone-pair count, and approximate bond angle(s).

10. For XeF₂, identify electron-group geometry, molecular geometry, central lone-pair count, and approximate bond angle(s).

11. For BrF₅, identify electron-group geometry, molecular geometry, central lone-pair count, and approximate bond angle(s).

12. For XeF₄, identify electron-group geometry, molecular geometry, central lone-pair count, and approximate bond angle(s).