

Name: Key

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Date: _____

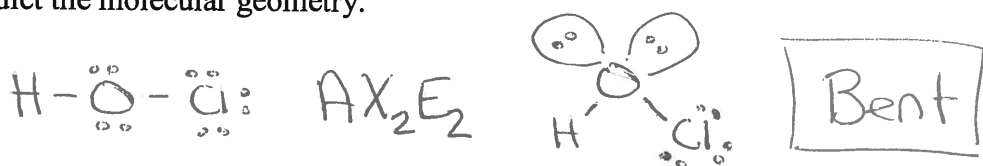
Chemistry 11H

VSEPR Worksheet

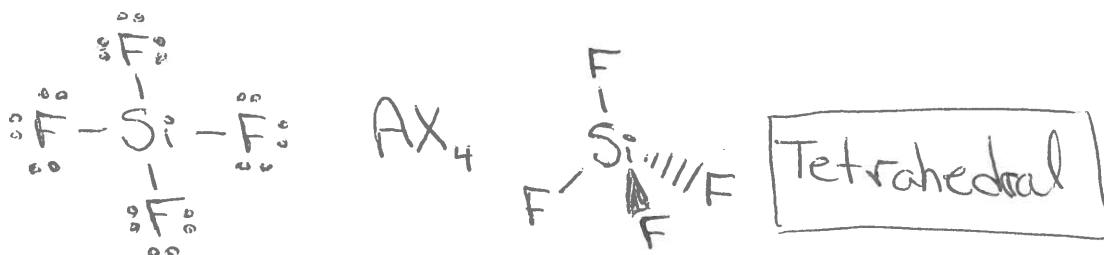
Assignment

1. Draw the Lewis Diagram, write the VSEPR notation of the central atom in each of the following, and predict the molecular geometry.

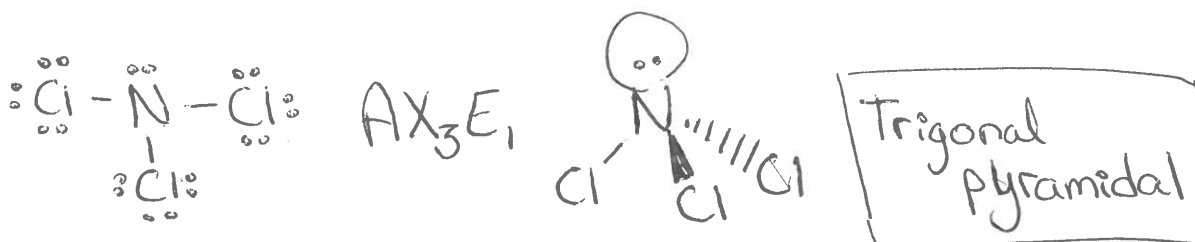
a. HOCl
14e⁻



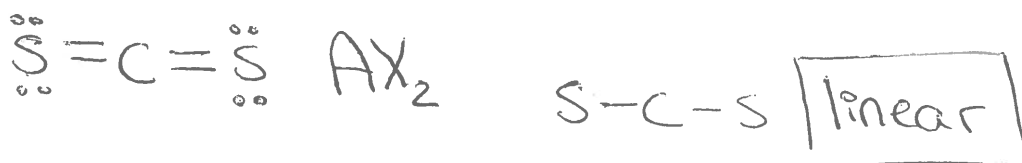
b. SiF₄
32e⁻



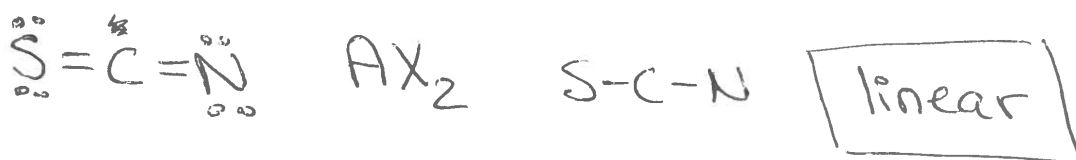
c. NCl₃
26e⁻



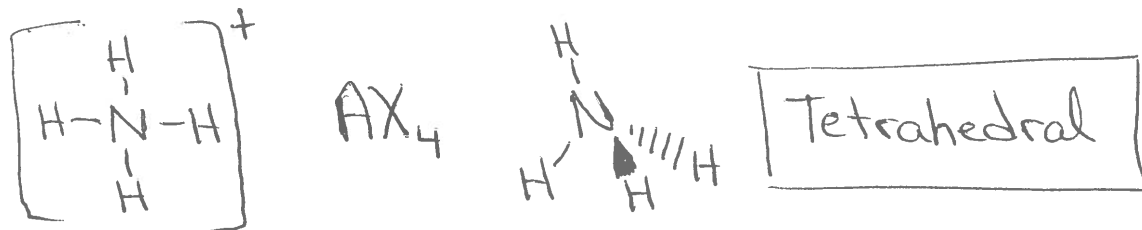
d. CS₂
16e⁻

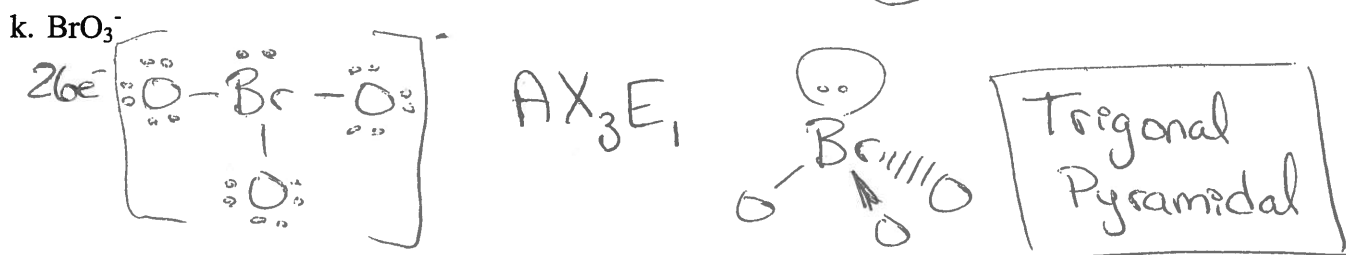
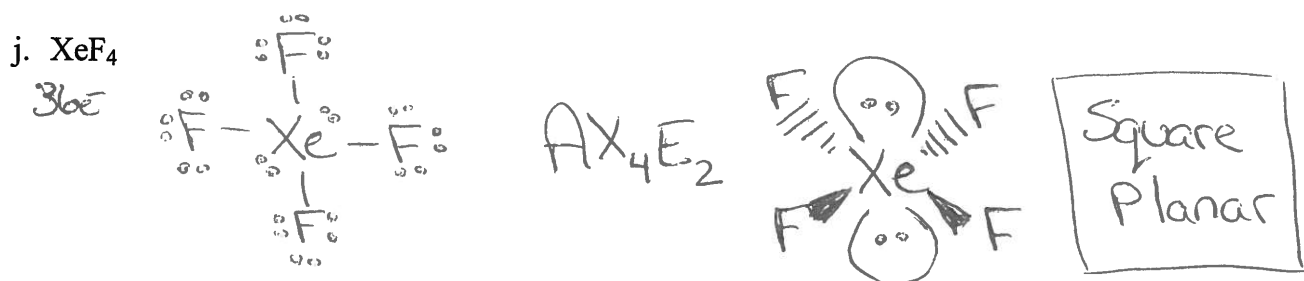
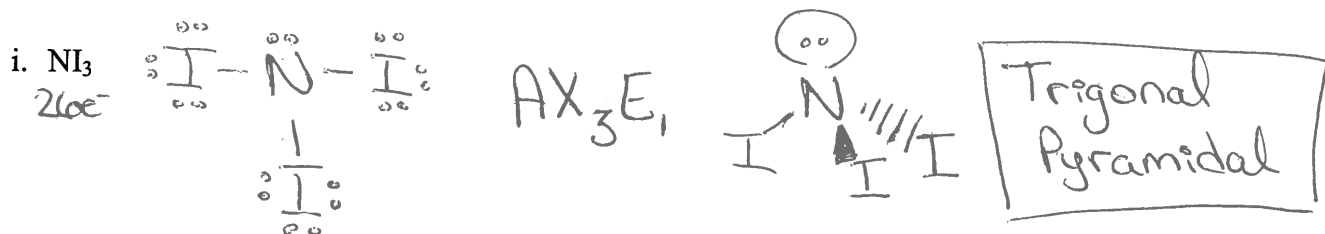
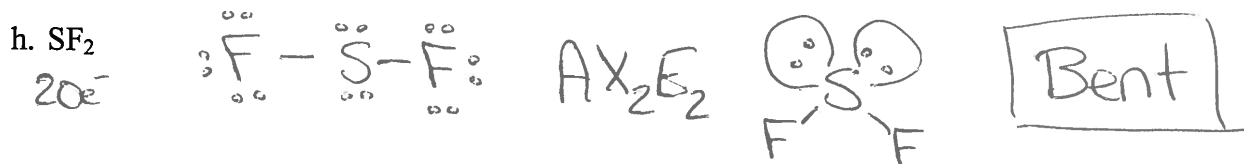
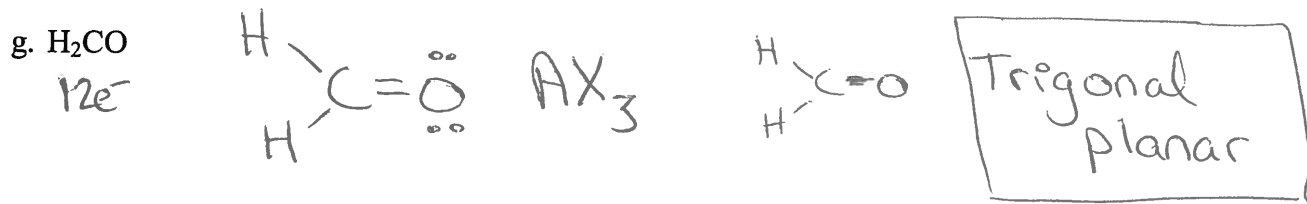


e. SCN⁻
16e⁻

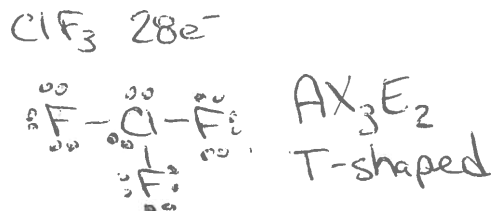
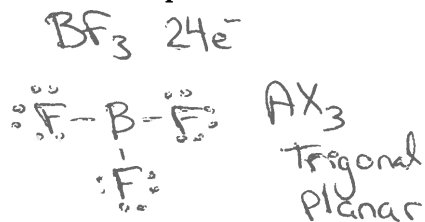


f. NH₄⁺





2. Explain why the molecule BF_3 is trigonal planar, whereas a molecule with a similar formula, ClF_3 is T-shaped.



BF_3 has a coordination number of 3, while ClF_3 has a coordination number of 5 (3 bonds + 2 lone pairs) making the molecule T-shaped.