

Molecular Geometries and Bonding Theories VSEPR:

<http://www.chemistry.uoguelph.ca/educmat/chm19104/vsepr/shapes.htm>

- For each of the molecules below
- use the link above and learn about VSEPR, and Lewis Structure
- use unlined paper for all diagrams and answers
- title each problem the molecule (XeF_2 - N_3^-)
- clearly number which problem (1-5 below) you are addressing.

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|----------------|------------------------|--------------------|----------------------|----------------|
| XeF_2 | COCl_2 | CCl_4 | PCl_5 | SF_6 |
| O_3 | H_3O^+ | SF_4 | IF_5 | SF_2 |
| ClF_3 | XeF_4 | CH_2^{2-} | N_2O | N_3^- |

- 1) Draw the Lewis structure
- 2) Indicate how many bonding pairs and non bonding pairs around the central atom
- 3) Indicate the correct skeletal structure
- 4) Determine the actual shape of the molecule
- 5) Based on the structure what is the molecules polarity