



Which of the following molecules is not planar?

- A) BF_3
- B) ClF_3
- C) NH_3
- D) XeF_4
- E) All the compounds above are planar

Which of the following molecules has a dipole moment?

- A) CH_4
- B) CO_2
- C) O_2
- D) SO_2

Determine the hybridization of the central atom in the compound XeF_4 .

- A) sp^3d
- B) sp^3
- C) sp^3d^2
- E) sp^2

Indicate the most likely hybridization of the central atom in the compound PCl_5 .

- A) sp^3d
- B) sp^3
- C) sp^3d^2
- E) sp^2

Indicate which of the following molecules has a dipole moment and a central atom with sp^3 hybridization

- A) CCl_4
- B) BF_3
- C) CHCl_3
- D) C_2H_2

For an octahedral geometry of the electron pairs distribution around the central atom of an ion or compound we would expect the hybridization of the central atom to be...

- A) sp
- B) dsp^2
- C) dsp^3
- D) sp^3d^2

Ethylene gas is widely used in industry as well as in biology as a hormone and anesthetic agent. Consider the molecular formula of ethylene (C_2H_4) what is the most likely hybridization for the central C atoms in this molecule?

- A) sp
- B) sp^2
- C) dsp^3
- D) sp^3d^2