

Ch. 9 Hybridization and Molecular Orbital Theory

What is Hybridization?

B:

C:

What is the shape of s orbitals?

What is the shape of p orbitals?

What are the characteristics of Sigma bonds?

What are the characteristics of Pi bonds?

What is the formula for Bond Order?

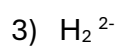
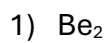
Draw a Lewis Structure for each molecule. Then draw the energy-level diagrams for the bolded and show how all bonds form.

CO

HCN

CH₃NH₂

Draw the energy-level diagrams for the following molecules, determine the bond order of the covalent bond in each. Determine whether it's paramagnetic or diamagnetic.



Use the following outline to diagram the species C_2 , C_2^- . Determine the bond order of each and indicate whether they are stable. Note that C is one of the exceptions in which the $\pi 2p$ orbital will fill before the $\sigma 2p$ orbitals.

