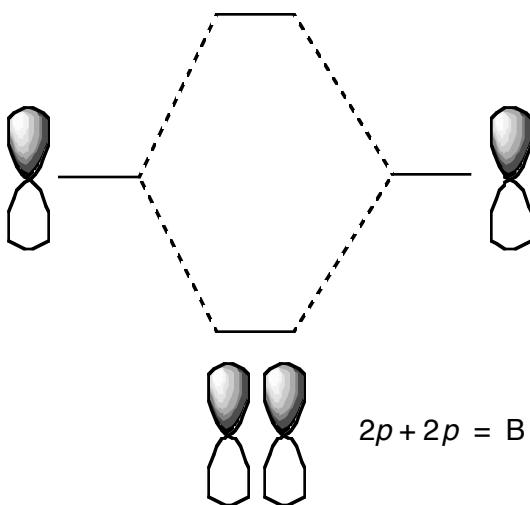
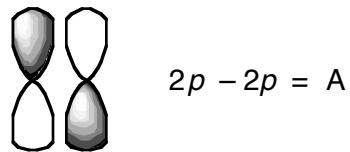
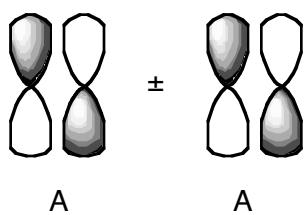
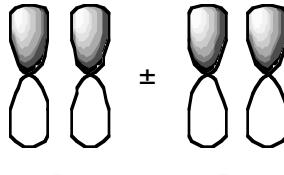


Answers to Problem 4, 2006

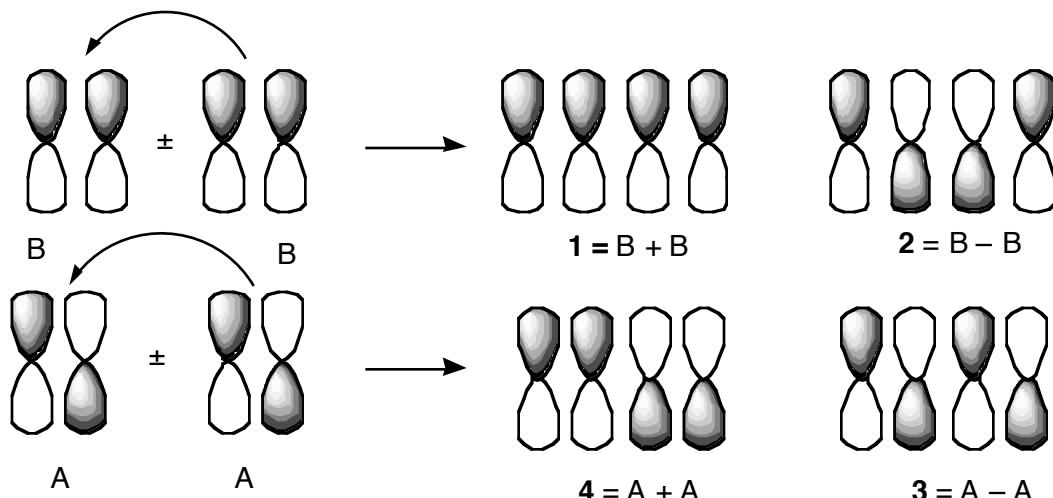
(a) $2p \pm 2p$
(b)



We interact $B \pm B$ and $A \pm A$

For two reasons we need not examine $B \pm A$.

1. all such interactions are "net zero"
2. at this level of "theory" we need only interact the orbitals closest in energy ($B \pm B$, $A \pm A$)



order in energy
by counting
new nodes:

- 3 three new nodes
- 2 two new nodes
- 4 one new node
- 1 no new nodes