**Dougherty Valley HS AP Chemistry**

**S-49**

**Bonding**

**Quick Check #3**

**Name: Date: Period: Seat #:**

🞎 Fill in the orbital diagram for bromine.

 

Write the ***short form electron configuration*** for Bromine: [Ar] \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

🞎 Bromine can make five bonds in molecules such as BrF5 Draw the Lewis dot structure for BrF5.



**SKIP!** We no longer think d hybridization happens, and even if it does, we would not use a normal orbital diagram to show it, we would need an MO diagram.

🞎 Draw the orbital diagram for bromine when it uses the “expanded octet”. (Use diagram above.)

🞎 Determine the ***formal charge*** for each atom in BrF5 molecule. Br = \_\_\_\_\_ F = \_\_\_\_\_

🞎 Consider the central bromine atom in BrF5:

*# of bonded atoms* = \_\_\_\_ *# of lone pairs* = \_\_\_\_ Steric Number = \_\_\_\_

🞎 What is the ***Electron-Pair Geometry*** of BrF5? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

🞎 What is the ***Molecular Geometry*** of BrF5? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_