

HClO2

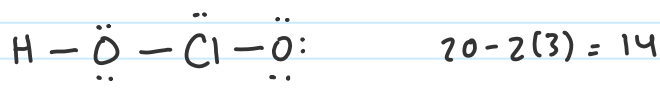
The formula suggests Cl is the primary atom that is placed first, aka central.

Additionally, Cl has a larger bond capacity than oxygen b/c it is in the third shell, so it can have a max of 7 bonds based on its valence.

This is because it has unoccupied d-orbitals which allows each of the 7 valence electrons to reside alone in orbitals that are all only half-occupied considering how many of them are available when extending to the d orbitals.

Another molecule that exemplifies this for chlorine is the well known Perchlorate ion: ClO_4^- which clearly goes beyond the maximum 1 bond allowed by the simple valence model of Fluorine for example, which resides in periodic table shell number two and has no such d orbitals to exploit.

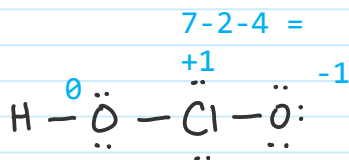
$$T = 1 + 7 + 2(6) = 8 + 12 = 20$$



$$20 - 2(3) = 14$$

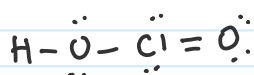
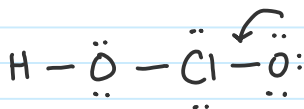
$$14 - 6 - 4 = 4$$

$$4 - 4 = 0$$



The molecule is neutral.

See if there is a better arrangement with lesser FC-s.



$$\text{FC}_\text{Cl} = 7 - 4 - 3 = 0$$