W-PS Physical Science Week 16 1-20-21

Pb Lead

Atomic Number : 82

Atomic Mass : 207.2 ≈ 207

$p^{\oplus}$: 82 = atomic number

n^{0} : 125 = Atomic mass − Atomic number

$e^{\ominus}$: 82

Ag Silver

Atomic Number : 47

Atomic Mass : 107.8682 ≈ 108

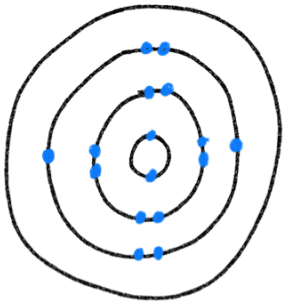
$p^{\oplus}$: 47

n^{0} : 61

$e^{\ominus}$: 47

Bohr Models (Electrons)

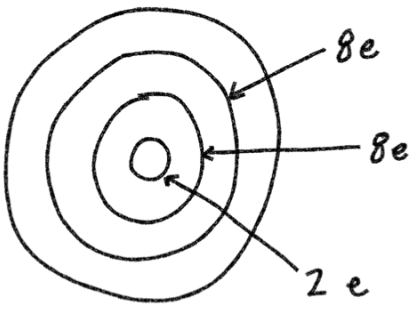
Sulfur



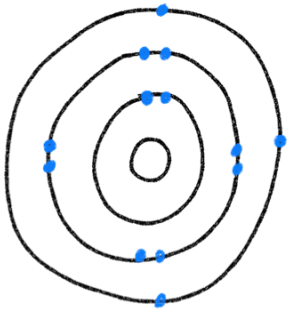
6 valence electrons

Valence Electrons = outermost electrons

Lewis Dot Structures



Aluminum



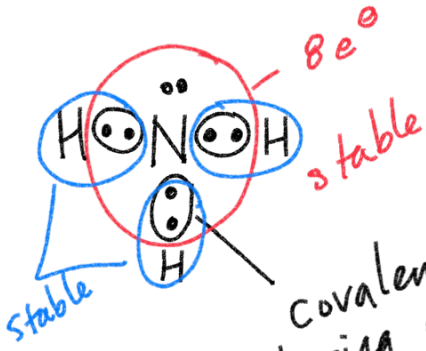
3 valence electrons

Lewis Dot Structures

Nitrogen Hydrogen Carbon Oxygen

Octet Rule

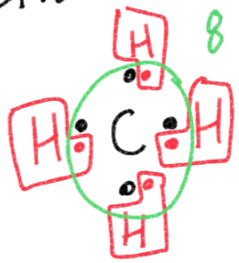
Atom is most stable when it has 8 electrons in its outer orbital/ shell.



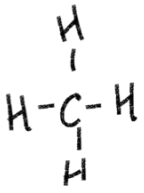
Covalent bond- sharing of valence electrons

Covalent bonds are strong bonds

methane

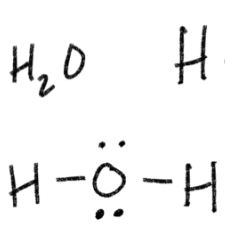


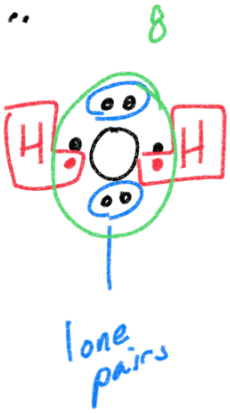
CH_4



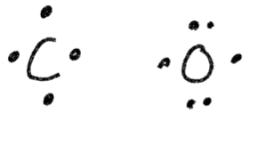
water

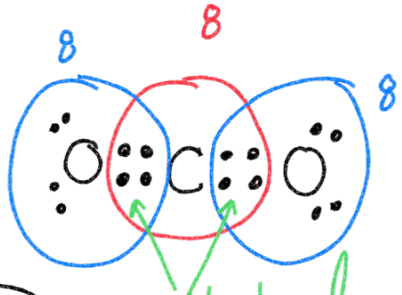
H_2O

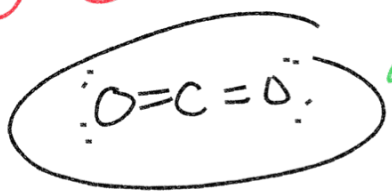




CO_2 carbon dioxide







* bonds are the sharing of electrons *

Chemical reactions are the attempt of atoms to exchange and rearrange electrons.

HW

HW/Quiz 15 due Jan 27th

Complete the Bohr Model and be ready to present next time

No HW/Quiz 16