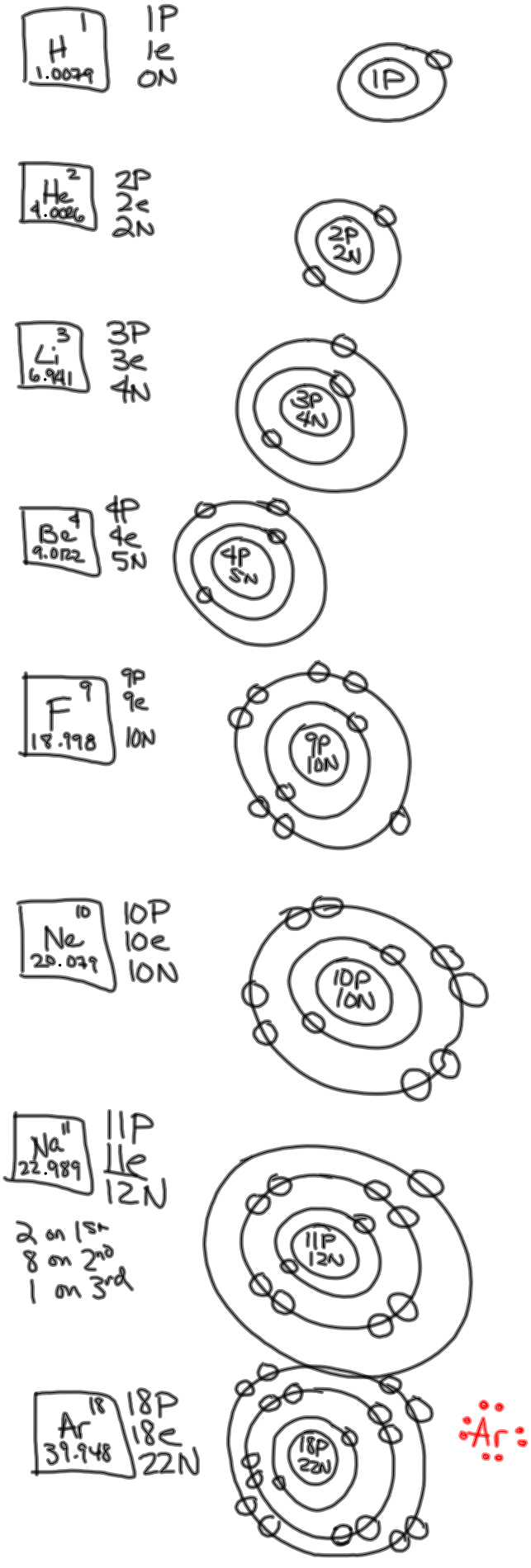
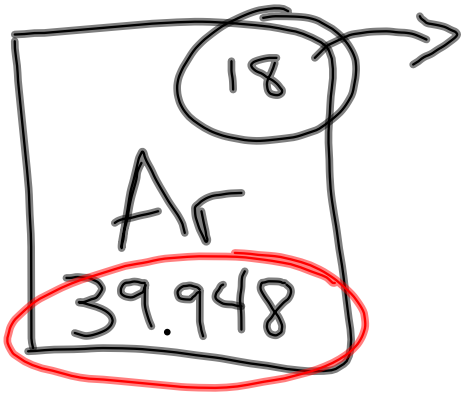

1
H
1.0079
1P
1e
0N
1P
2
He
4.0026
2P
2e
2N
2P
2N
3
Li
6.941
3P
3e
4N
3P
4N
4
Be
9.0122
4P
4e
5N
4P
5N
9
F
18.998
9P
9e
10N
9P
10N
10
Ne
20.079
10P
10e
10N
10P
10N
11
Na
22.989
11P
11e
12N
2 on 1st
8 on 2nd
1 on 3rd
11P
12N
18
Ar
39.948
18P
18e
22N
18P
22N
Ar



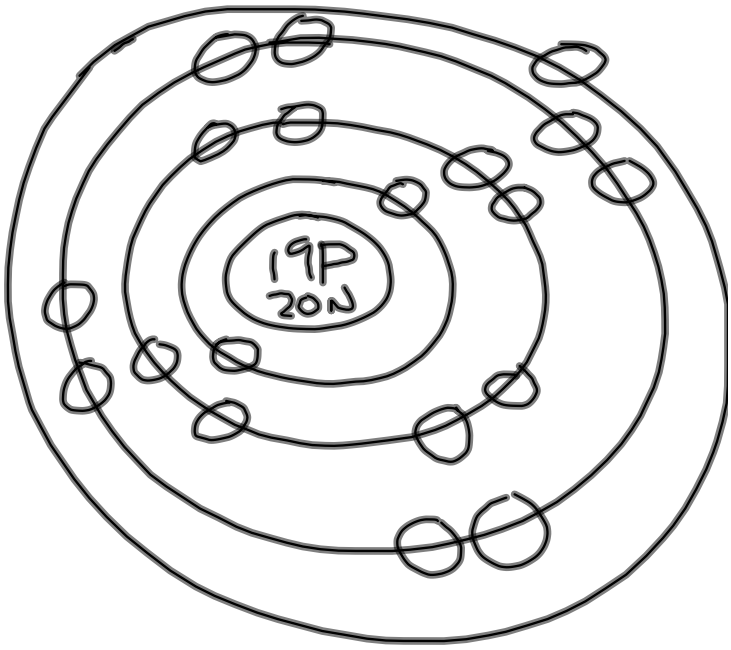
# of P = 18

# of P = # e

18e

40 total # of particles in nucleus − 18P = 22N

19P
19e
20 N



2 on 1st
8 on 2nd
8 on 3rd
1 on 4th

The electrons on the outermost energy level of an atom are called

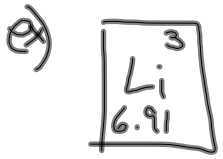
Valence electrons

* these are the electrons that are important for predicting if (and how) the atom will interact with other atoms!

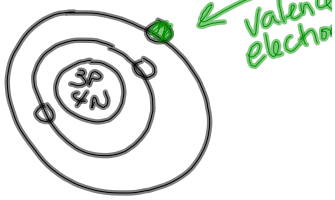
Basically, all atoms want 8 valence electrons on their outermost energy level. They will give, take, or share electrons to get that.

We can use "dot diagrams" to the show the valence electrons of atoms of different elements.

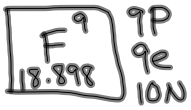
Ex)



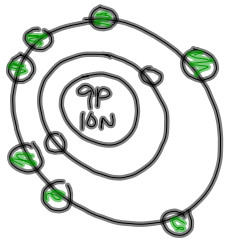
3P
3e
4N



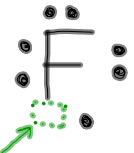
Dot Diagram:



9P
9e
10N



7 valence electrons



empty space

Drawing Dot Diagrams:

1. Write the chemical symbol
2. Figure out how many V.E there are
3. Put the dots around the symbol