Average Atomic Mass: The average mass of all the atoms of the element.

Like a test average:
85, 76, 61, 92, 70

Average = 76.8

ALL CARBON ATOMS HAVE...

6 PROTONS

#PROTONS DETERMINE THE ATOM

ALL CARBON ATOMS HAVE...

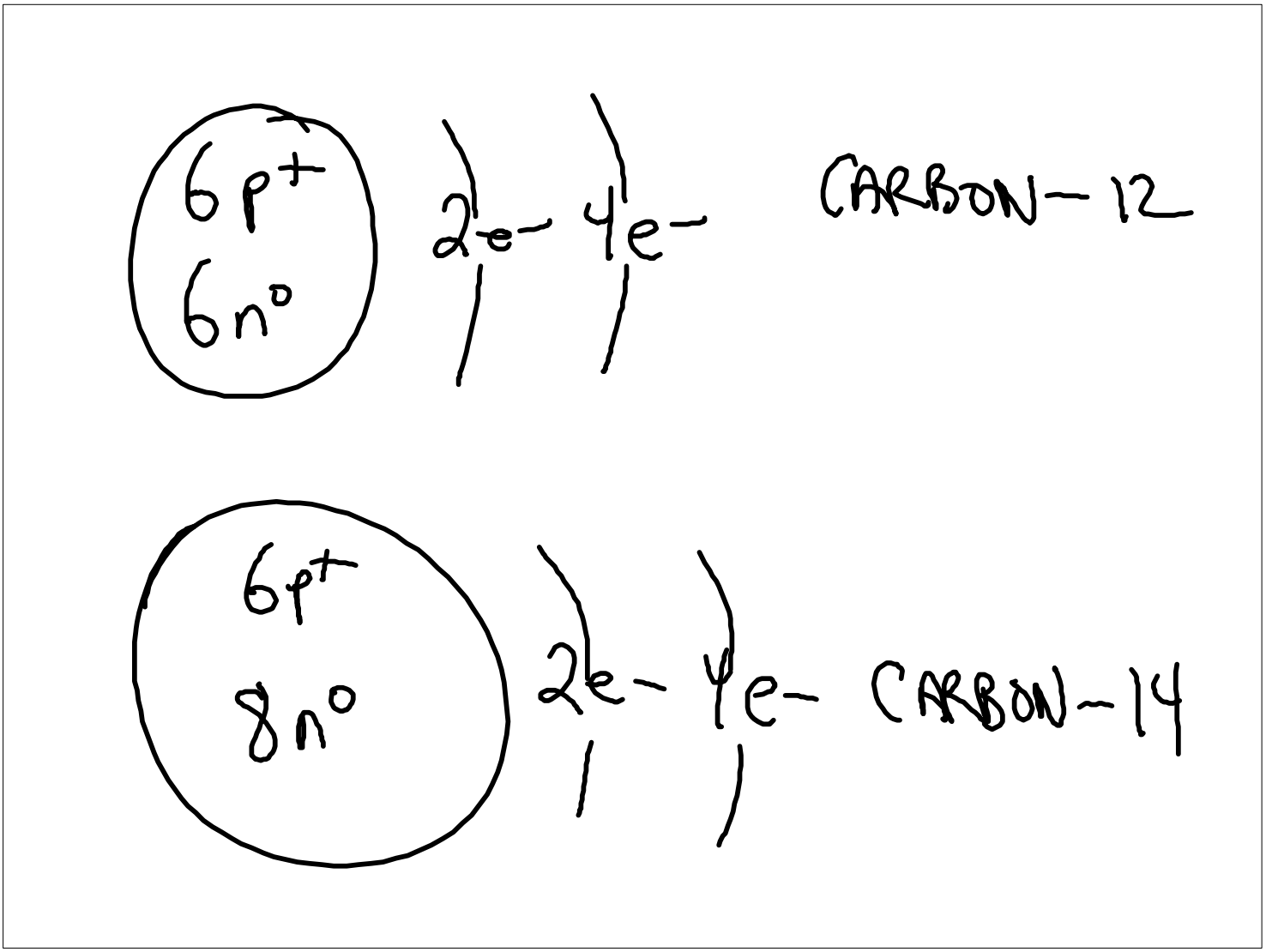
6 PROTONS

#PROTONS DETERMINE THE ATOM

CARBON-12

HAS $6p^+$, $6n^0$ (12 THINGS IN NUCLEUS)

VERY COMMON, STABLE ISOTOPE


6p+
6n°
2e- 4e-
CARBON-12
6p+
8n°
2e- 4e- CARBON-14

Isotopes are atoms with the same atomic number but different atomic mass.

They have the same number of protons.

They have different numbers of neutrons.

ISOTOPES OF CARBON

CARBON-12

CARBON-13

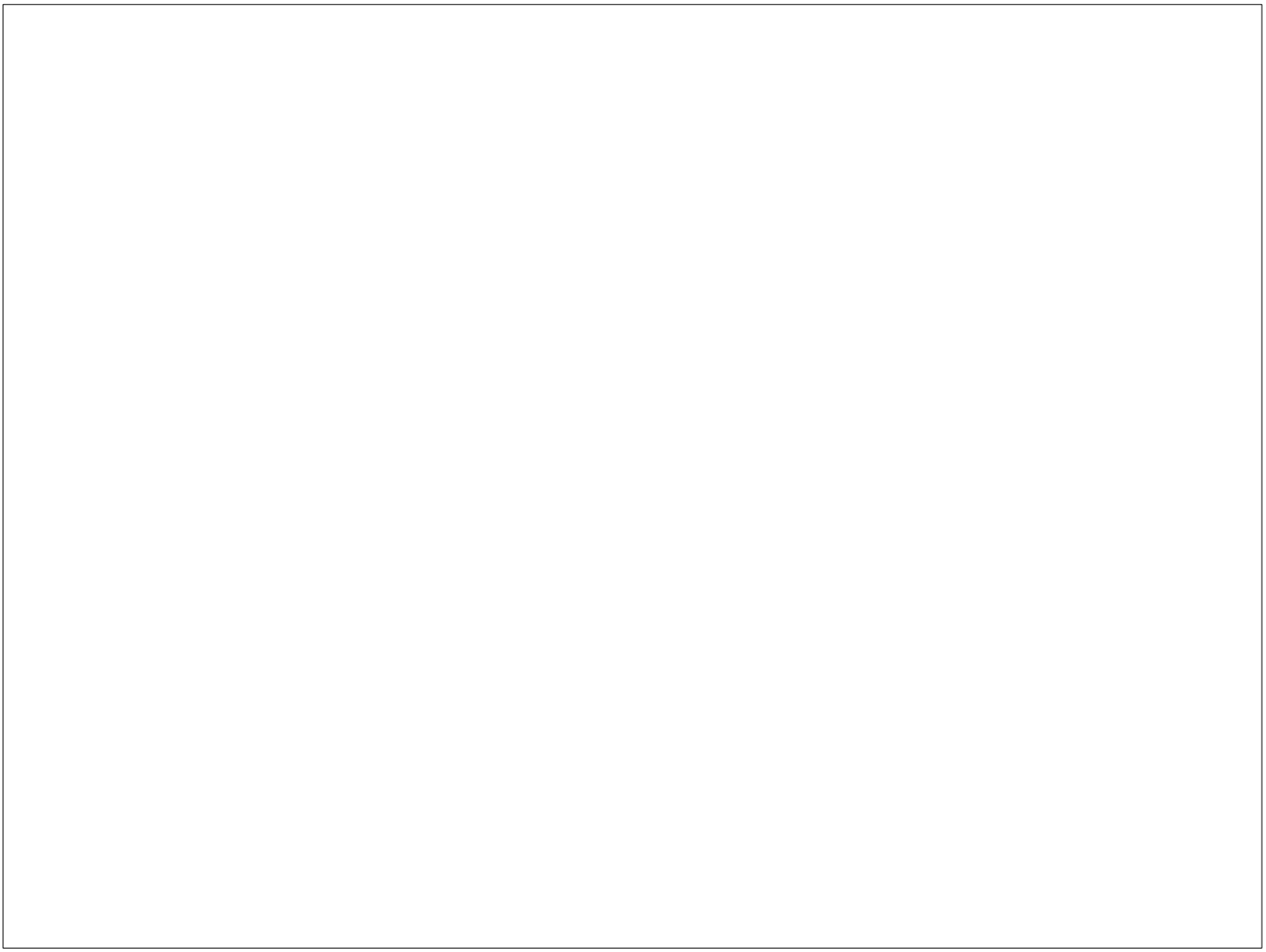
CARBON-14

HAVE SAME # p^+ BUT DIFFERENT # n^0

Some isotopes are STABLE.
Their nuceli don't fall apart.

Some nuceli fall apart.

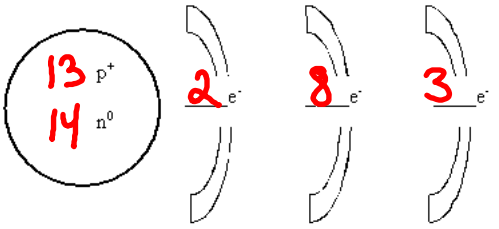
They have a Half-life.



Elements of Periodic Table Models

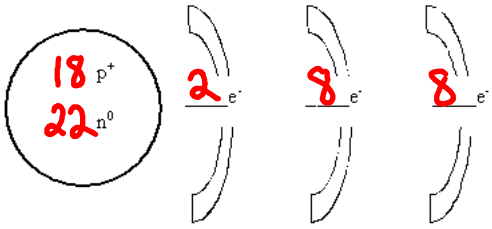
13
Al
Aluminum
26.98154

Element Name ALUMINUM
Number of Protons 13
Number of Neutrons 14
Number of Electrons 13



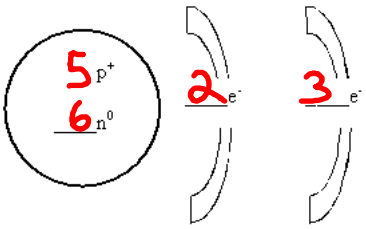
18
Ar
Argon
39.948

Element Name ARGON
Number of Protons 18
Number of Neutrons 22
Number of Electrons 18



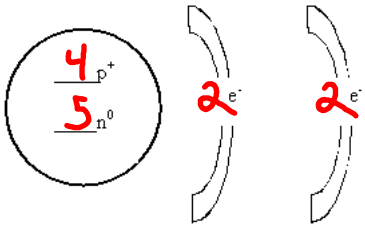
5
B
Boron
10.81

Element Name BORON
Number of Protons 5
Number of Neutrons 6
Number of Electrons 5



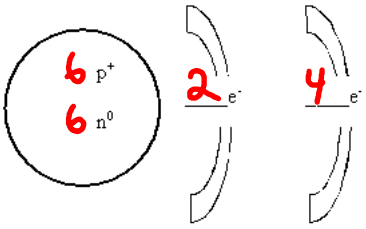
4
Be
Beryllium
9.01218

Element Name BERYLLIUM
Number of Protons 4
Number of Neutrons 5
Number of Electrons 4



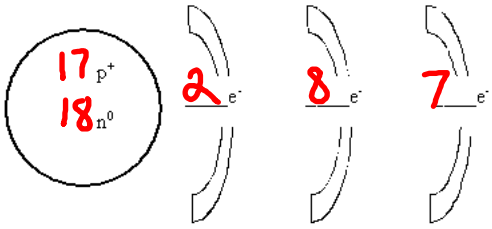
6
C
Carbon
12.011

Element Name CARBON
Number of Protons 6
Number of Neutrons 6
Number of Electrons 6



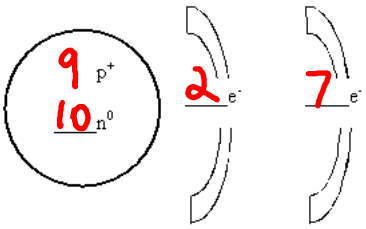
17
Cl
Chlorine
35.453

Element Name CHLORINE
Number of Protons 17
Number of Neutrons 18
Number of Electrons 17



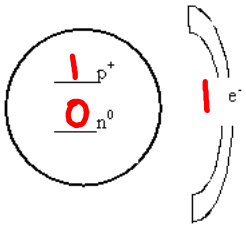
9
F
Fluorine
18.998403

Element Name FLUORINE
Number of Protons 9
Number of Neutrons 10
Number of Electrons 9



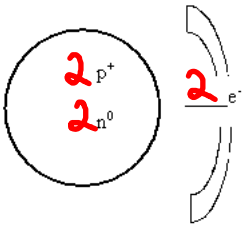
1
H
Hydrogen
1.00794

Element Name HYDROGEN
Number of Protons 1
Number of Neutrons 0
Number of Electrons 1



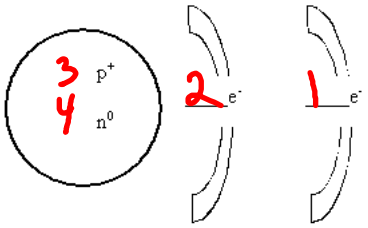
2
He
Helium
4.0026

Element Name HELIUM
Number of Protons 2
Number of Neutrons 2
Number of Electrons 2



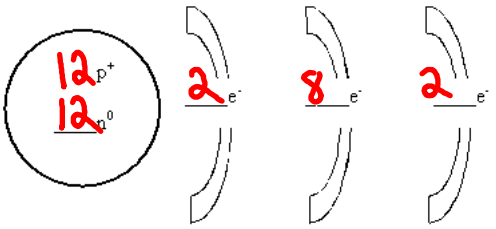
3
Li
Lithium
6.941

Element Name LITHIUM
Number of Protons 3
Number of Neutrons 4
Number of Electrons 3



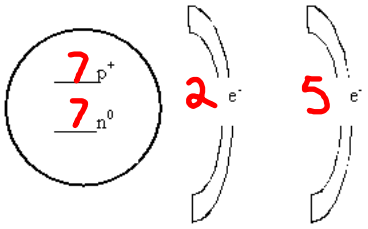
12
Mg
Magnesium
24.305

Element Name MAGNESIUM
Number of Protons 12
Number of Neutrons 12
Number of Electrons 12



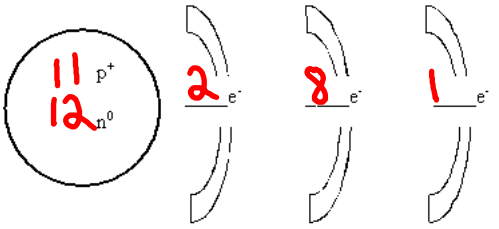
7
N
Nitrogen
14.0067

Element Name NITROGEN
Number of Protons 7
Number of Neutrons 7
Number of Electrons 7



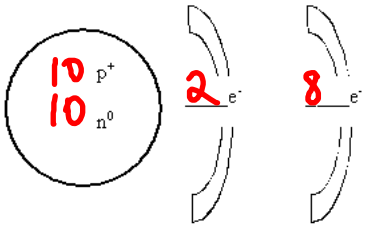
11
Na
Sodium
22.98977

Element Name SODIUM
Number of Protons 11
Number of Neutrons 12
Number of Electrons 11



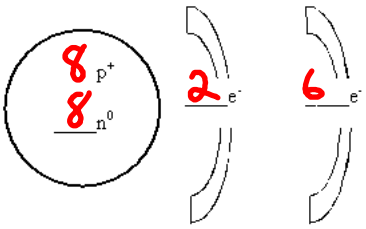
10
Ne
Neon
20.179

Element Name NEON
Number of Protons 10
Number of Neutrons 10
Number of Electrons 10



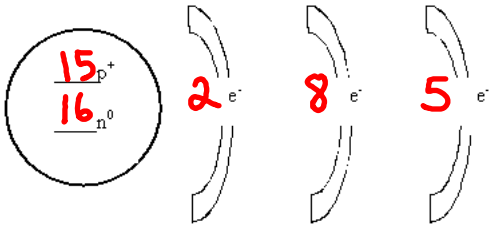
8
O
Oxygen
15.9994

Element Name OXYGEN
Number of Protons 8
Number of Neutrons 8
Number of Electrons 8



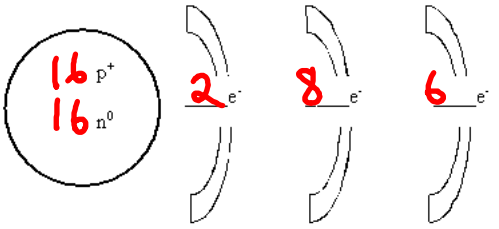
15
P
Phosphorous
30.97376

Element Name PHOSPHORUS
Number of Protons 15
Number of Neutrons 16
Number of Electrons 15



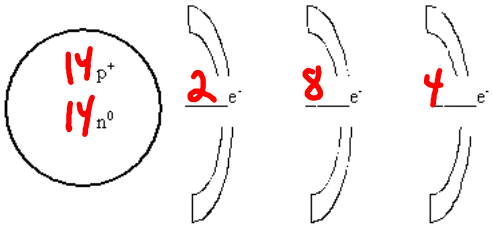
16
S
Sulfur
32.06

Element Name SULFUR
Number of Protons 16
Number of Neutrons 16
Number of Electrons 16

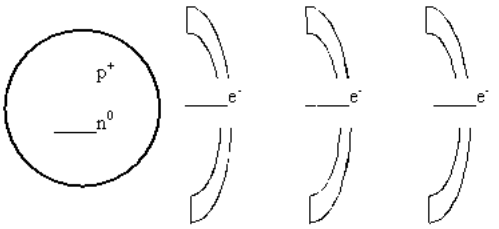


14
Si
Silicon
28.0855

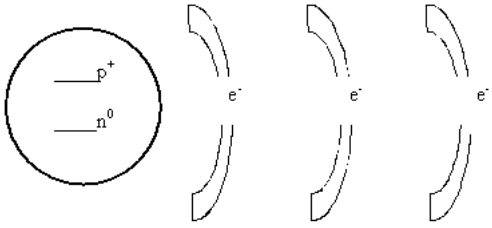
Element Name SILICON
Number of Protons 14
Number of Neutrons 14
Number of Electrons 14

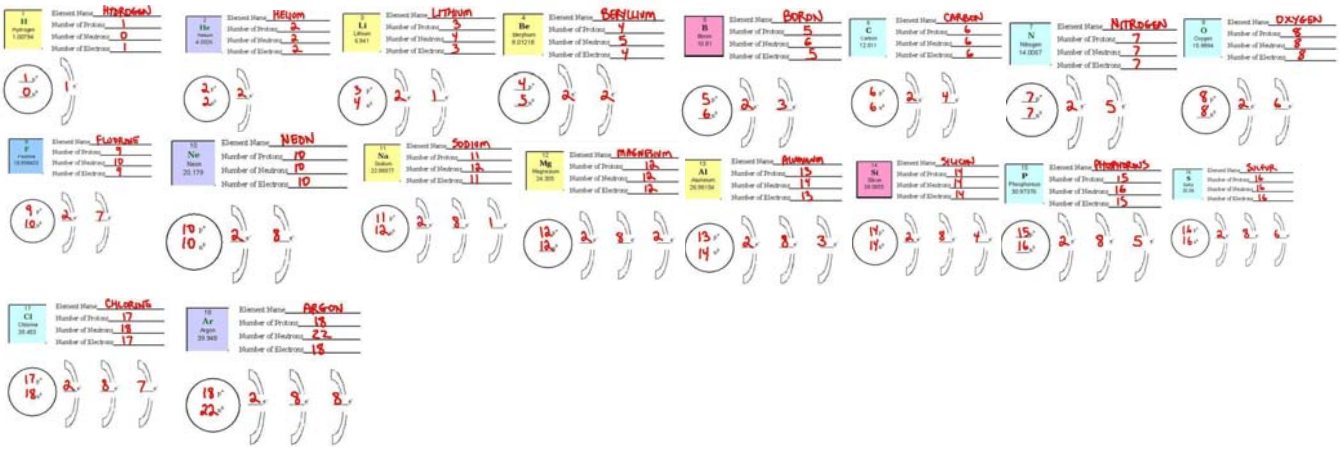


Element Name _____
Number of Protons _____
Number of Neutrons _____
Number of Electrons _____



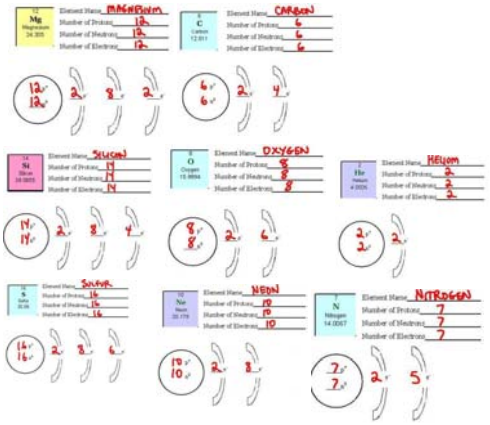
Element Name _____
Number of Protons _____
Number of Neutrons _____
Number of Electrons _____



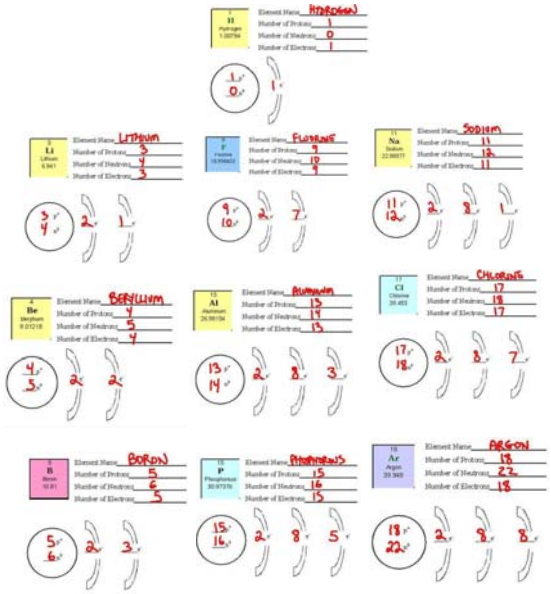


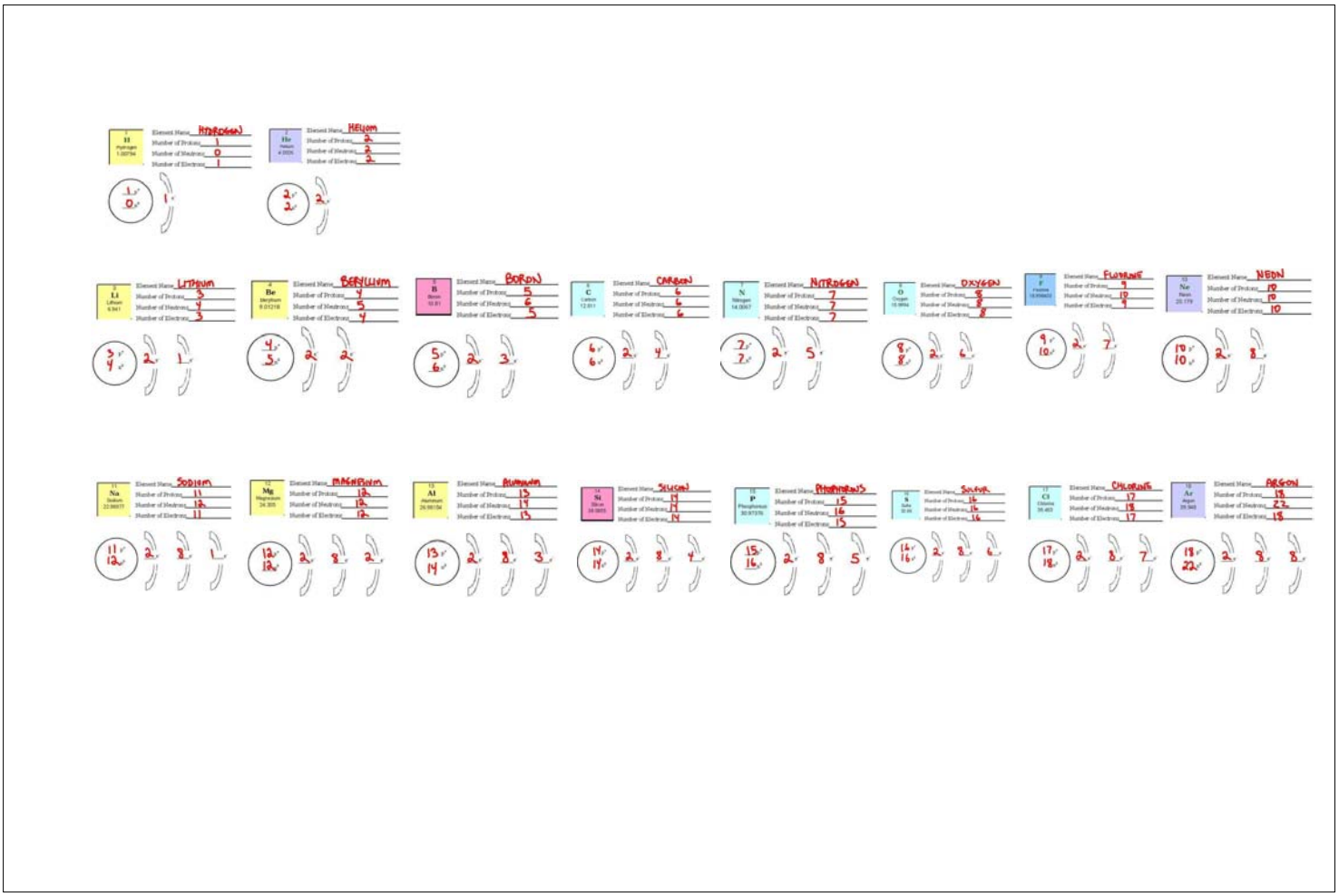
Put these elements into groups

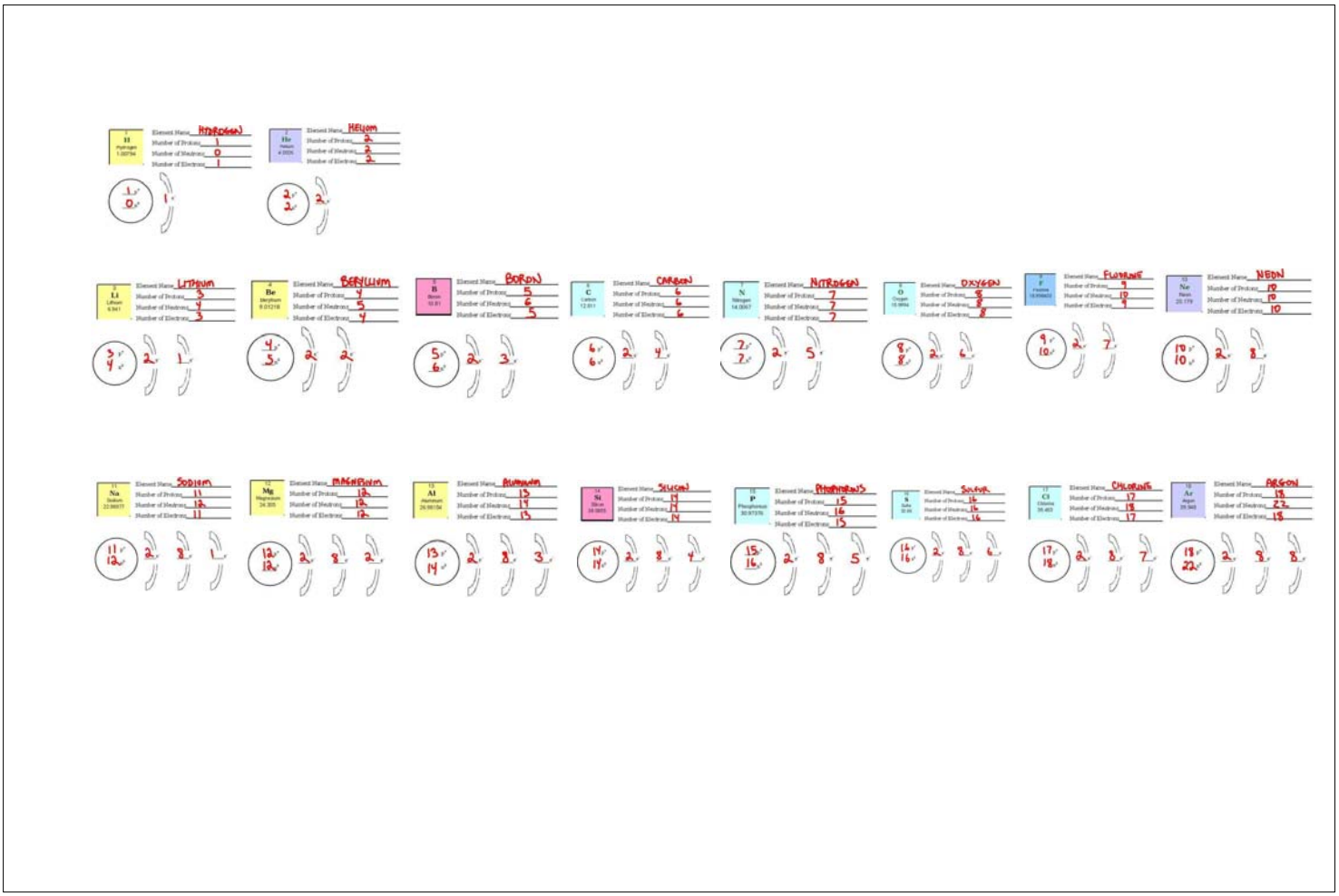
Same protons-neutrons



Different protons-neutrons




Element Name HYDROGEN
Number of Protons 1
Number of Neutrons 0
Number of Electrons 1
Element Name HELIUM
Number of Protons 2
Number of Neutrons 2
Number of Electrons 2
Element Name LITHIUM
Number of Protons 3
Number of Neutrons 4
Number of Electrons 3
Element Name BERYLLIUM
Number of Protons 4
Number of Neutrons 5
Number of Electrons 4
Element Name BORON
Number of Protons 5
Number of Neutrons 6
Number of Electrons 5
Element Name CARBON
Number of Protons 6
Number of Neutrons 6
Number of Electrons 6
Element Name NITROGEN
Number of Protons 7
Number of Neutrons 7
Number of Electrons 7
Element Name OXYGEN
Number of Protons 8
Number of Neutrons 8
Number of Electrons 8
Element Name FLUORINE
Number of Protons 9
Number of Neutrons 10
Number of Electrons 9
Element Name NEON
Number of Protons 10
Number of Neutrons 10
Number of Electrons 10
Element Name SODIUM
Number of Protons 11
Number of Neutrons 12
Number of Electrons 11
Element Name MAGNESIUM
Number of Protons 12
Number of Neutrons 12
Number of Electrons 12
Element Name ALUMINUM
Number of Protons 13
Number of Neutrons 14
Number of Electrons 13
Element Name SILICON
Number of Protons 14
Number of Neutrons 14
Number of Electrons 14
Element Name PHOSPHORUS
Number of Protons 15
Number of Neutrons 16
Number of Electrons 15
Element Name SULFUR
Number of Protons 16
Number of Neutrons 16
Number of Electrons 16
Element Name CHLORINE
Number of Protons 17
Number of Neutrons 18
Number of Electrons 17
Element Name ARGON
Number of Protons 18
Number of Neutrons 22
Number of Electrons 18


HYDROGEN
Number of Protons 1
Number of Neutrons 0
Number of Electrons 1
HELIUM
Number of Protons 2
Number of Neutrons 2
Number of Electrons 2
LITHIUM
Number of Protons 3
Number of Neutrons 4
Number of Electrons 3
BERYLLIUM
Number of Protons 4
Number of Neutrons 5
Number of Electrons 4
BORON
Number of Protons 5
Number of Neutrons 6
Number of Electrons 5
CARBON
Number of Protons 6
Number of Neutrons 6
Number of Electrons 6
NITROGEN
Number of Protons 7
Number of Neutrons 7
Number of Electrons 7
OXYGEN
Number of Protons 8
Number of Neutrons 8
Number of Electrons 8
FLUORINE
Number of Protons 9
Number of Neutrons 10
Number of Electrons 9
NEON
Number of Protons 10
Number of Neutrons 10
Number of Electrons 10
SODIUM
Number of Protons 11
Number of Neutrons 12
Number of Electrons 11
MAGNESIUM
Number of Protons 12
Number of Neutrons 12
Number of Electrons 12
ALUMINUM
Number of Protons 13
Number of Neutrons 14
Number of Electrons 13
SILICON
Number of Protons 14
Number of Neutrons 14
Number of Electrons 14
PHOSPHORUS
Number of Protons 15
Number of Neutrons 16
Number of Electrons 15
SULFUR
Number of Protons 16
Number of Neutrons 16
Number of Electrons 16
CHLORINE
Number of Protons 17
Number of Neutrons 18
Number of Electrons 17
ARGON
Number of Protons 18
Number of Neutrons 22
Number of Electrons 18