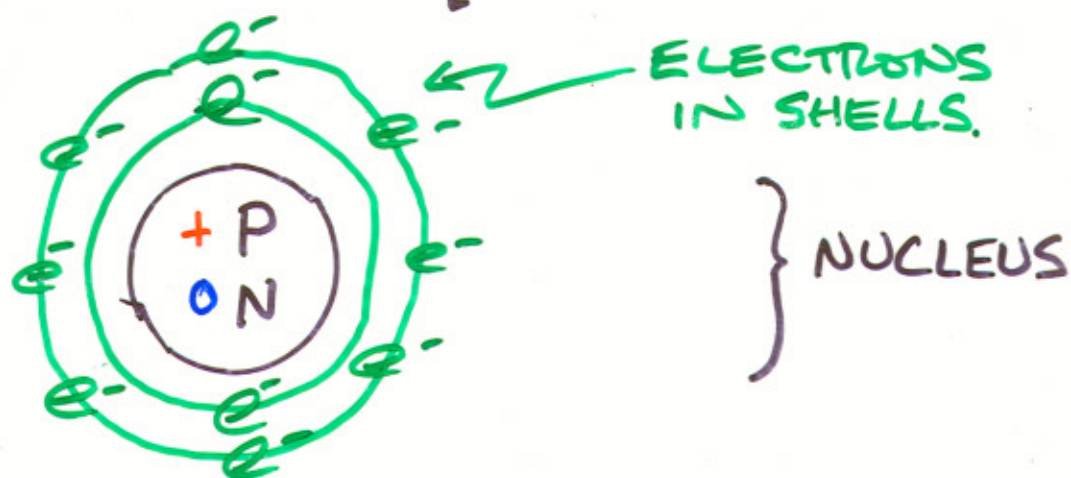


CHEMISTRY REVIEW

1. ELEMENTS MADE OF ATOMS



FROM PERIODIC TABLE

6
C
CARBON
12.01

ATOMIC NO. = NO. OF PROTONS (P)

ATOMIC MASS = P + N

OF ELECTRONS = P

eg. $6+ + 6- = 0$ NEUTRAL

2. ISOTOPES

ATOMIC WEIGHTS VARY (ie. # OF NEUTRONS) FOR THE SAME ELEMENT.

eg. $^{12}_6\text{C}$ $^{13}_6\text{C}$ $^{14}_6\text{C}^*$ (RADIOACTIVE)

3. MOLECULES AND COMPOUNDS

2 OR MORE ATOMS TOGETHER FORM MOLECULES

UP COMPOUNDS



OCTET RULE

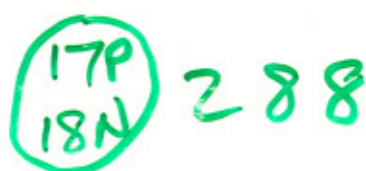
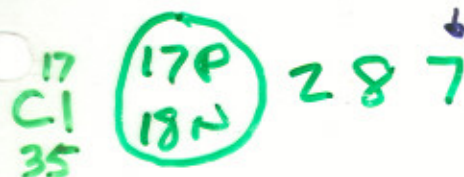
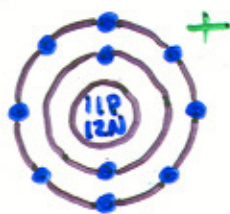
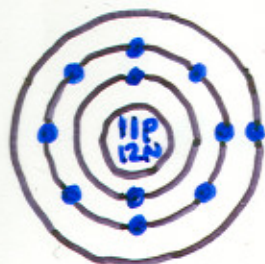
ATOMS REACT WITH EACH OTHER TO
HAVE 8 ELECTRONS IN OUTERMOST SHELL
EXCEPT H + He

SEE fig. 2.4, ~~P.20~~ P.22

Na ATOM

Na ION

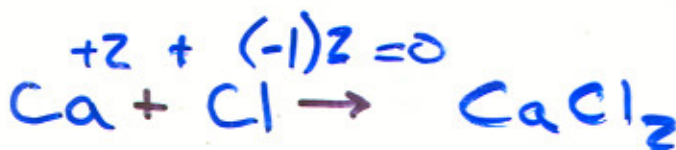
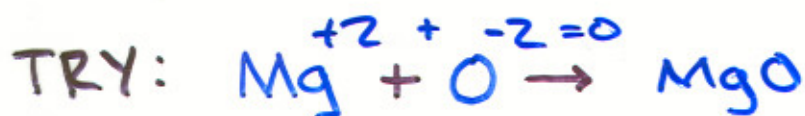
BOHR
MODELS



Cl^-

IONIC REACTION (METAL + NON-METAL)

ATOMS LOSE OR GAIN ELECTRONS TO
PRODUCE A MOLECULE (TRANSFER OF e^-)



OXIDATION LOSS OF e^-
REDUCTION GAIN OF e^-

COVALENT REACTIONS (NON-METAL + NON-METAL)

ATOMS SHARE ELECTRONS TO FORM A MOLECULE.

SEE fig. 2.6 P. 22 P. 24



SINGLE BOND \rightarrow 1 PAIR OF e^- SHARED

DOUBLE BOND \rightarrow 2 " " " "

TRIPLE BOND \rightarrow 3 " " " "

ELECTRON DOT STRUCTURES SHOW e^- IN
OUTERMOST SHELL (LEWIS DIAGRAMS)



* $\begin{array}{c} \cdot \\ \cdot \\ \cdot \\ \cdot \end{array} \text{C} \cdot$ CAN FORM 4 BONDS

OXIDATION LOSS OF H

REDUCTION GAIN OF H

CELL COMPOUNDS W.S. T.Y. P. 43 #1-4
#1-4