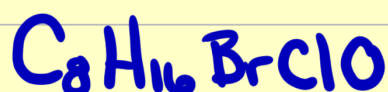


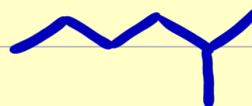
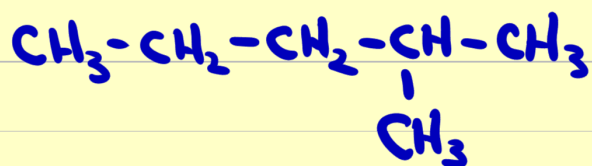
# ISOMERISM.

## - MOLECULAR FORMULA

$C_2H_6$  - GIVES INFO ABOUT # AND TYPES OF ATOMS, BUT NO INFO ABOUT HOW THEY'RE CONNECTED. C-1<sup>ST</sup> H-2<sup>ND</sup> OTHERS ALPHABETICALLY



## - STRUCTURAL FORMULA



- FORMULA INDICATING CONNECTIVITY (WHAT IS BONDED TO WHAT) - MAY OR MAY NOT INDICATE STEREOCHEMISTRY.

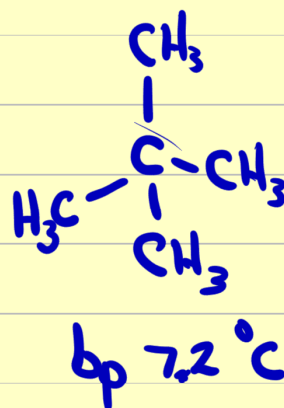
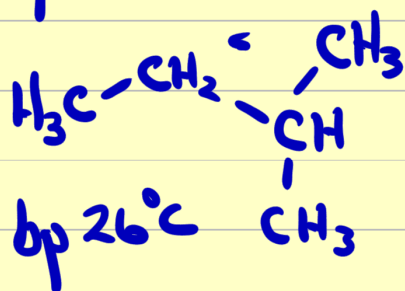
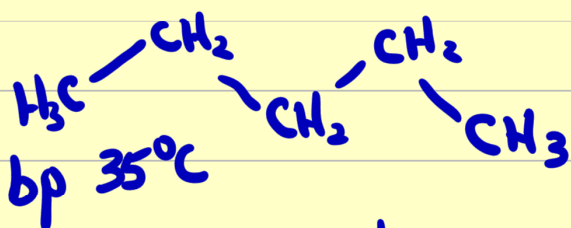
## ISOMERS -

TWO OR MORE COMPOUNDS WITH SAME MOLECULAR FORMULA, DIFF. STRUCTURAL FORMULA.

# 1<sup>ST</sup> TYPE - STRUCTURAL ISOMERS (POSITIONAL, CONSTITUTIONAL)

- SIMPLEST.

$C_5H_{12}$



- ATOMS ARE NOT CONNECTED TO SAME POSITIONS
- DIFFERENT COMPOUNDS (CPDS)
  - DIFF. mp, bp, DENSITY, REFRACTIVE INDEX, NMR SPECTRA.

## NAMING ORGANIC COMPOUNDS

- IUPAC INTERNATIONAL UNION OF PURE AND APPLIED CHEMISTRY HAS ACCEPTED RULES FOR HOW TO NAME CPDS.

## GENERALITIES.

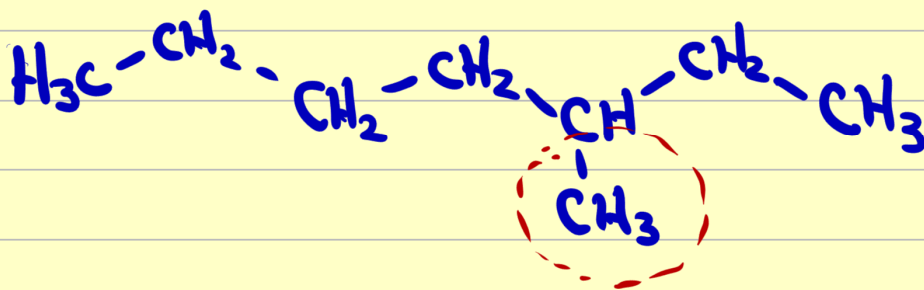
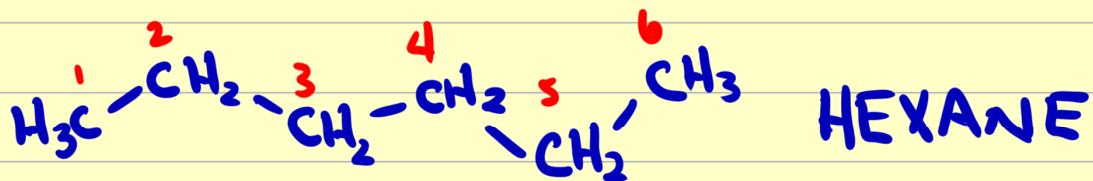
PREFIX + ROOT + SUFFIX = NAME

ROOT - # ATOMS IN THE LONGEST CARBON CHAIN.

# C'S	NAME (ROOT)	C'S	ROOT
1	METH	7	HEPT
2	ETH	8	OCT
3	PROP	9	NON
4	BUT	10	DEC
5	PENT	11	UNDEC
6	HEX	12	DODEC

SUFFIX - TELLS WHAT KIND OF COMPOUND IT IS (WHAT FUNCTIONAL GROUP)

- ALKANE
- ALKENE
- ALKYNE
- ANE
- ENE
- YNE



HEPTANE

PREFIX - WHAT IS SUBSTITUTED ON THE MAIN CHAIN, AND WHERE

- 1 CARBON - METH - BUT BECAUSE IT'S A SUBSTITUENT, WE USE METHYL (OR ETHYL OR BUTYL)

- COULD BE ON 5<sup>th</sup> OR 3<sup>RD</sup> C  
- USE LOWER #

3-METHYLHEPTANE

## • OTHER SUBSTITUENTS - HALOGENS

F - FLUORO

Cl - CHLORO

Br - BROMO

I - IODO

SPACING - WORDS NORMALLY NOT SEPARATED.

• NUMBERS SEPARATED FROM WORDS BY HYPHENS

- NUMBERS AND NUMBERS SEPARATED BY COMMAS.