C11 - 0.0 - Organic Review

$C_\#H_\#$	# $C's$		
Meth	1	Hex	6
Eth	2	Hept	7
Prop	3	Oct	8
But	4	Non	9
Pent	5	Dec	10

Full/Skeleton Line Structure

$C^{\pm 4}$

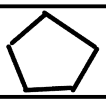
Each C needs a combination of bonds* and H's attached to add to 4!

Alkane [ane] C_nH_{2n+2} $H = 2C + 2$

Alkyl: [ane→yl] $R - CH_3$ [R : *Hydrocarbon*]

1) Longest Alkane Chain
2) Attached Alkyl
2) #-Location of Alkyl @

1) *Alphabetical*
2) *Smallest #*

Cycloalkanes: [cyclo]  [C_nH_{2n}]

alkene $= C$ [$ane \rightarrow ene$] [C_nH_{2n}]

alkyne $\equiv C$ [$ane \rightarrow yne$] [C_nH_{2n-2}]

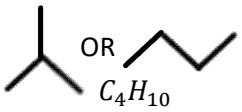
Double/Triple Bond Overrides Alphabetical!

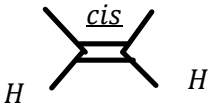
Count from before the double/triple bond

dienes: two double bonds [diene]

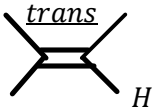
Right to Left

[(di/tri)]

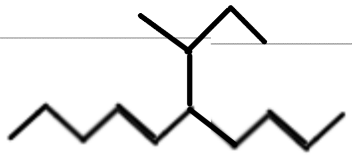
[*Isomers*] *Structural*  OR C_4H_{10}



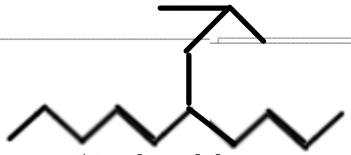
$2 - Butene$ C_4H_8



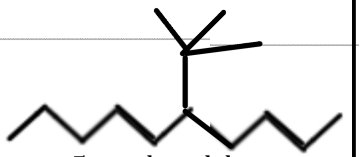
sec 1
iso 2
tert 3



5 sec butyl decane



5 iso butyl decane



5 tert butyl decane

alkyl halides: [$ine \rightarrow o$] $R - Cl$ $(Halogens^{-1})$

Prefixes (before) All else Suffixes (after)

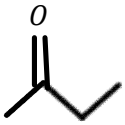
alcohOLs [$ane \rightarrow anol$] $R - OH$

Group (last) Overrides Ethyl!

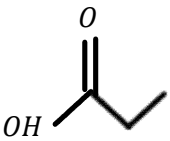
OH^{-1}

ALdehyde [$ane \rightarrow anal$] $R - C(=O)H$ 

Each Oxygen needs a 2 bonds! O^{-2}

keytONEs [$ane \rightarrow anone$] $R - C(=O) - R$ 

Count away from the 'Group"

cArbOxylIC ACID [$ane \rightarrow anoic\ Acid$] $R - COOH$ 

alcohol + aldehyde

AMINe [$amin + o$] $R - NH_2$

AMIDE [$ane \rightarrow amide$] $R - CONH_2$ $R - C(=O) - NH_2$

amine + keytone

ether [$yl \rightarrow oxy$] $R - O - R$

ester [$e \rightarrow oate$] $R - COO - R$ $R - C(=O) - O - R$

ether + keytone

Aromatics (Benzenes) 

halide alcohol aldehyde → carboxylic acid

amine keytone → amide

ether → ester