

Questions/Concerns from Student Data Sheets

- 1) I am working FT. I am nervous about class.
- 2) Are there any help sessions?
- 3) Gone on exam day - take it at other time?
- 4) Gone Aug 24 to 30 - concerns.
- 5) I plan to change my lab schedule.
- 6) I plan to miss classes, but I realize that is my problem.
- 7) It's been a couple years since I took chemistry.
- 8) I do not work fast on exams.
- 9) I hope the professor is reachable in times of need.

Student Data Sheets Needed

Brandon A.  
Thuy-Vy B.  
Michael P.  
Megan W.

Lab Safety Agreements Needed

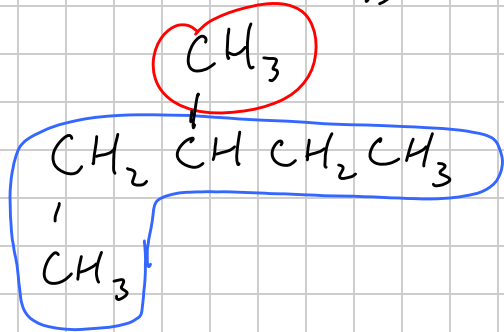
Latre L.  
Michael P.

D2L - Problems are from the text - end of chapter.

You are allowed two attempts per problem.

Scheduled downtime from 10:00pm Friday to  
10:00 Saturday.

From End of Class Yesterday:

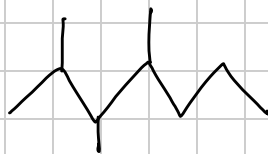


3-methylpentane

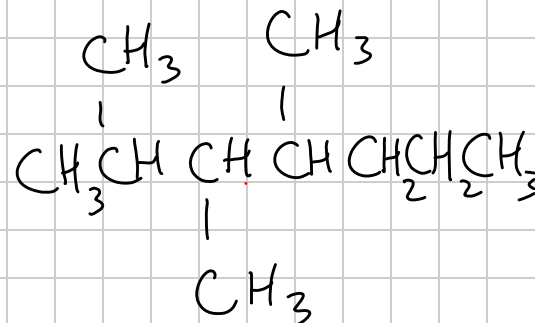


3-ethyl-2-methylhexane

2,3,4-trimethylheptane

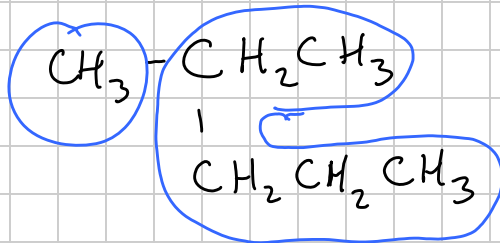
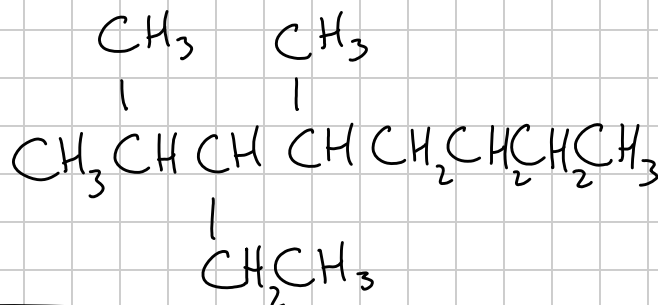


$C_{10}H_{22}$

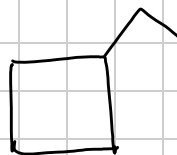
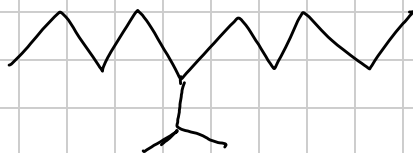


3-ethyl-2,4-dimethyloctane

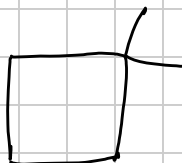
$C_{12}H_{26}$



2-methylpentane



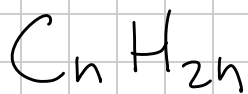
ethylcyclobutane



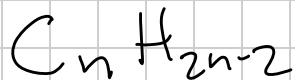
1,1-dimethylcyclobutane

# unsaturated hydrocarbons

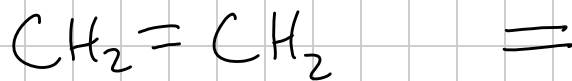
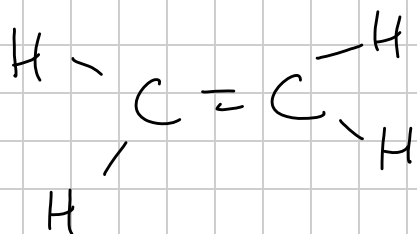
1) alkenes - have C-to-C double bond



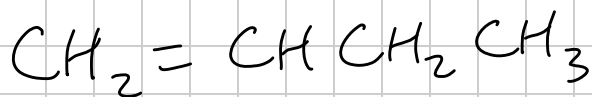
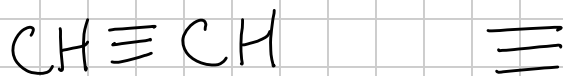
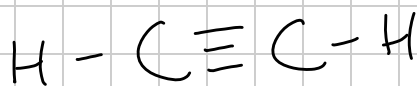
2) alkynes - have C-to-C triple bond



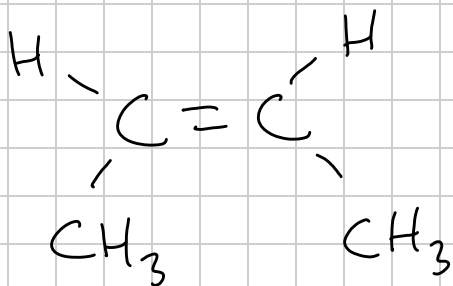
ethene



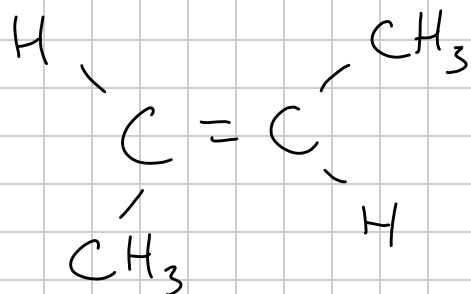
ethyne



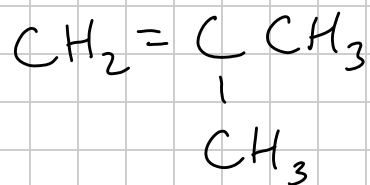
1-butene



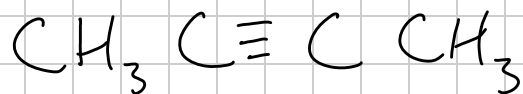
cis-2-butene



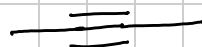
trans-2-butene



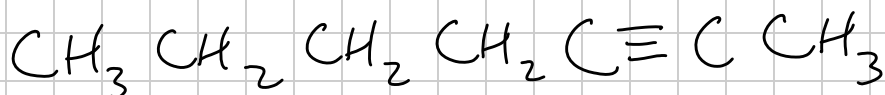
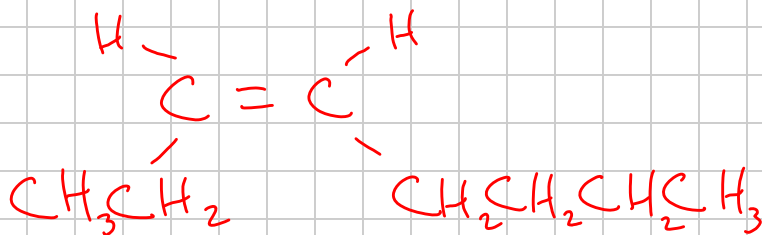
2-methyl-1-propene  
do not need to know



2-butyne

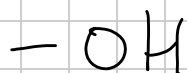


cis-3-octene

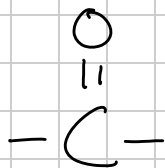


2-heptyne

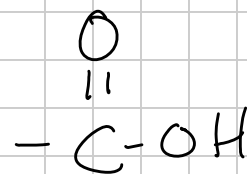
## Functional Groups



hydroxyl  
group



carbonyl  
group

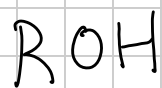


carboxyl  
group

To name: ① \* Identify and name corresponding alkane

② \* Drop -e from alkane name

alcohol



③ \* replace with -ol

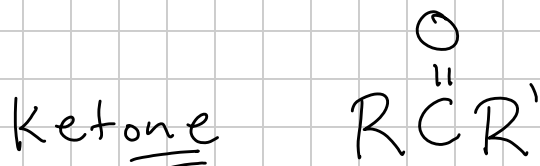
④ \* position of hydroxyl group must be given if 3 or more C's

aldehyde



③ \* replace with -al

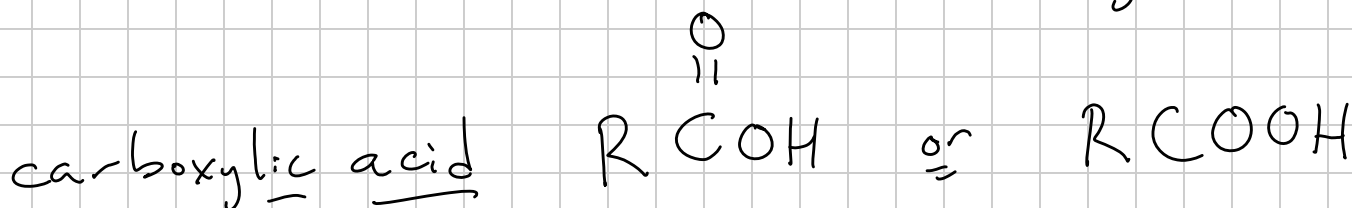
ketone



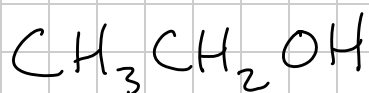
③ \* replace with -one

④ \* position of carbonyl group must be given

carboxylic acid

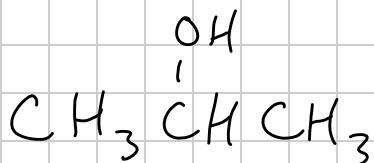
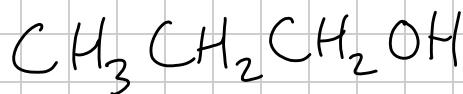


③ \* replace with -oic acid



ethanol

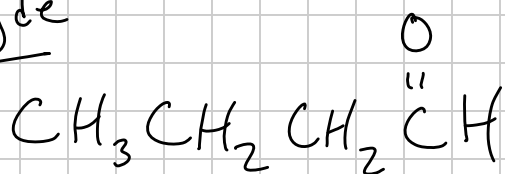
1-propanol



2-propanol

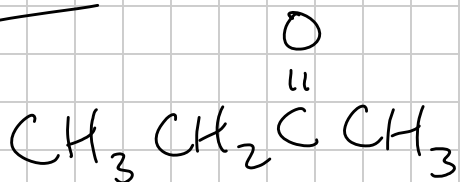
# IUPAC Nomenclature

aldehyde



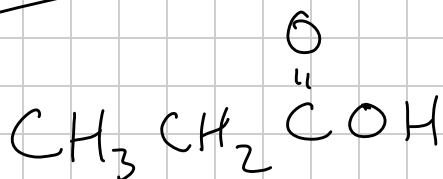
butanal

Ketone



2-butanone

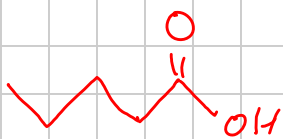
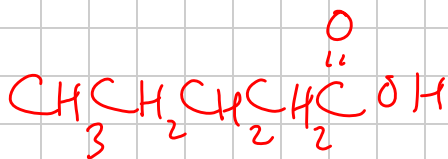
carboxylic acid



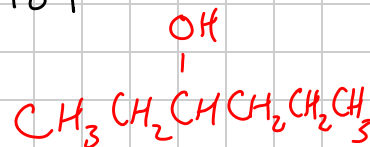
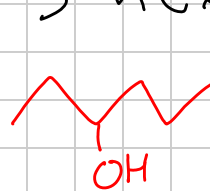
propanoic acid

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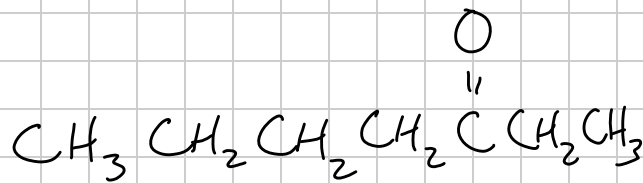
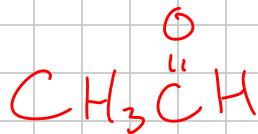
pentanoic acid



3-hexanol

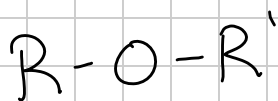


ethanal



3-heptanone

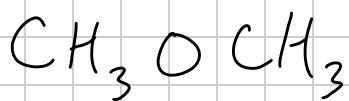
## ethers



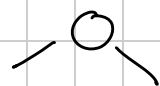
- we will use common names

\* each alkyl group is named alphabetically, separated by a space, followed by "ether"

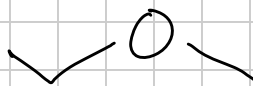
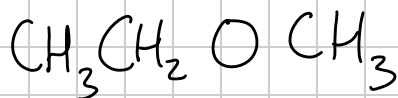
\* if both alkyl groups are the same, then di- used



dimethyl ether



ethyl methyl ether



reactions of alcohols

> look @ in lab

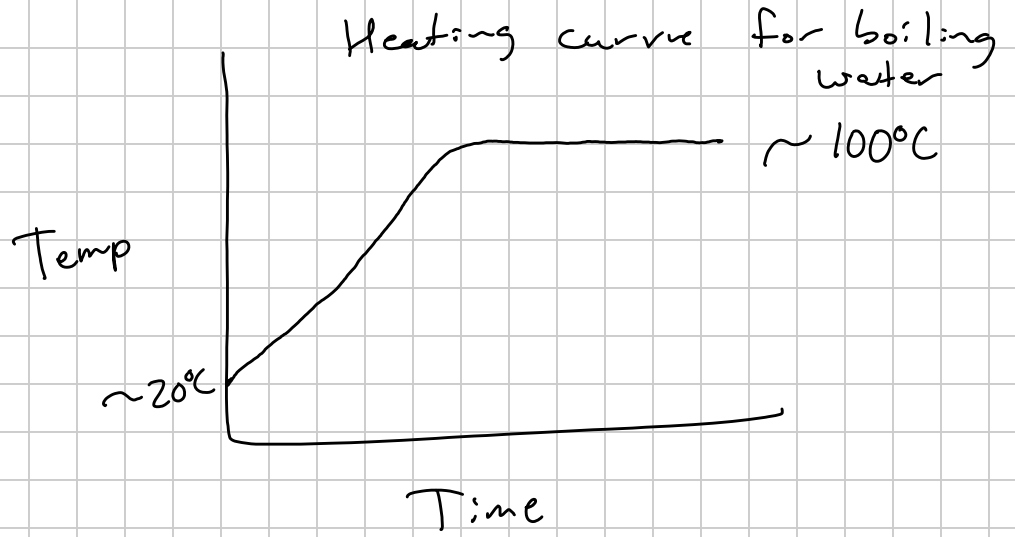
esters

amines - on your own \* learn what an amine is

\* don't worry about naming

\* distinguish between primary, secondary, tertiary amines

# Chapter 11



read about phase changes on own