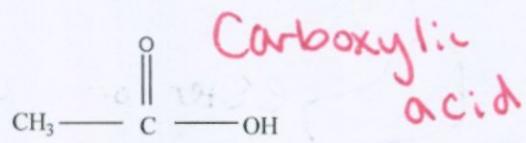
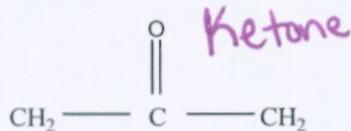
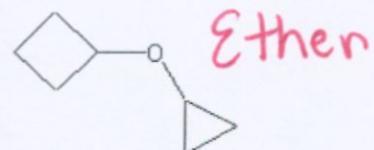
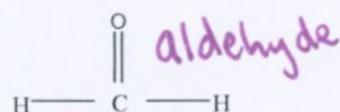
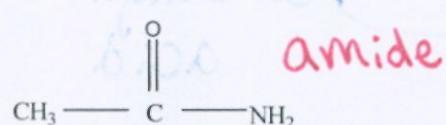
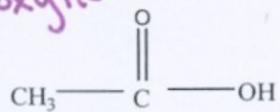


Worksheet 9: Functional Groups

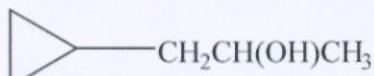
1. What functional groups are present in each molecule below?



Carboxylic acid

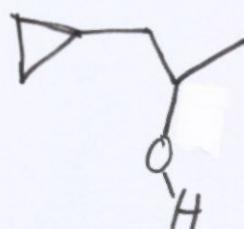


6. The alcohol below is classified as which of the following?

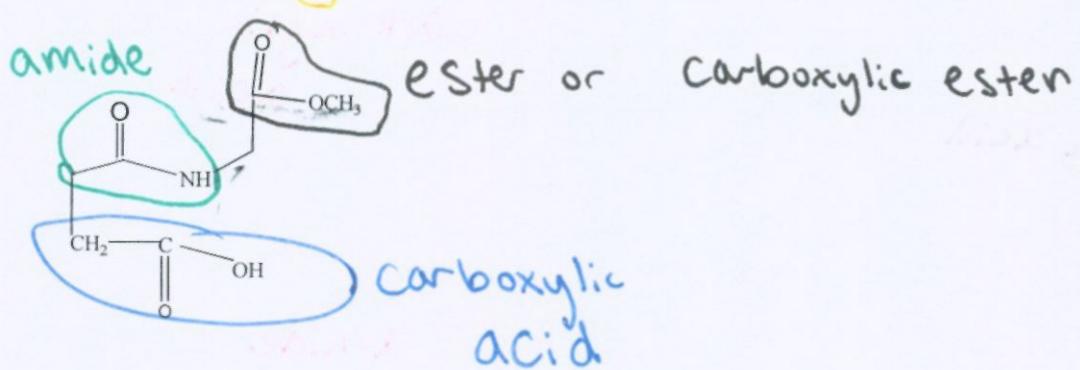
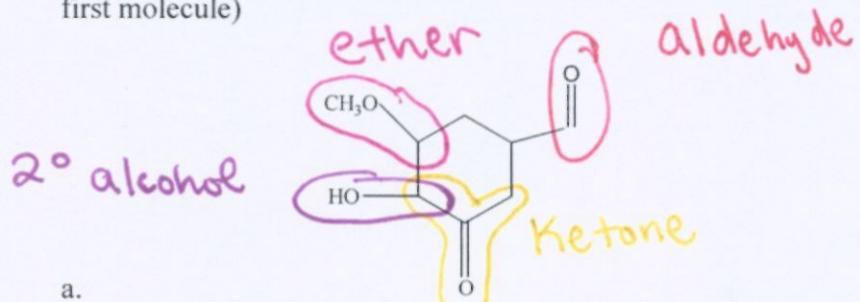


- a. primary alcohol
- b. secondary alcohol**

- c. tertiary alcohol
- d. aromatic alcohol

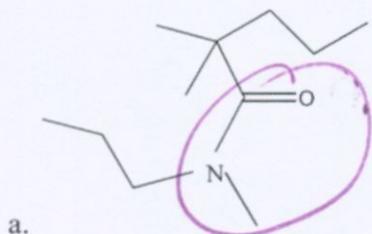


Circle and name the functional groups in the following molecules (not including cyclic Carbon ring in first molecule)



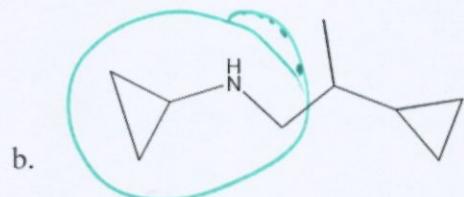
b.

3. How many functional groups and **different** hydrocarbons can you spot in each molecule?



1 kind of hydrocarbon
-Alkane

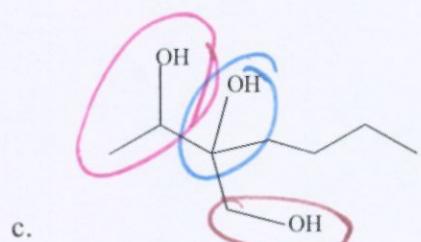
1 functional group
-amide



1 functional group
-Secondary (2°) amine

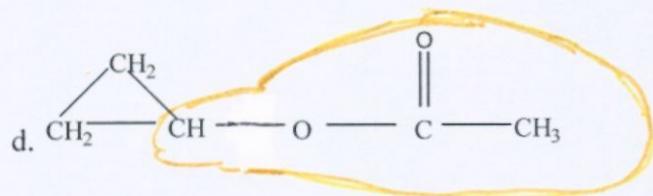
1 kind of hydrocarbon
-Alkane

-more specifically
there are 2 cyclopropane groups



- 3 functional groups
 - primary (1°) alcohol
 - tertiary (3°) alcohol
 - Secondary (2°) alcohol

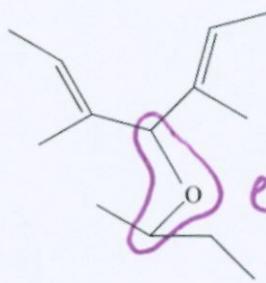
- 1 hydrocarbon
-alkane



• Ester

Hydrocarbons

- alkanes
- a cyclopropane group



f.

ether

1 functional group
- ether

hydrocarbons present

- alkanes
- 2 sets of alkenes