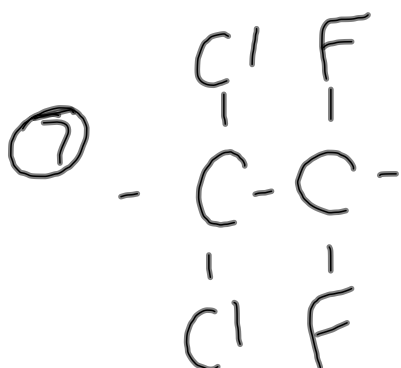
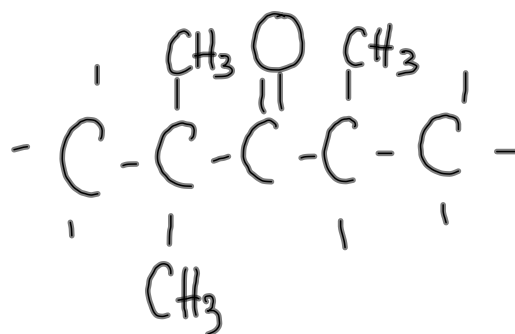


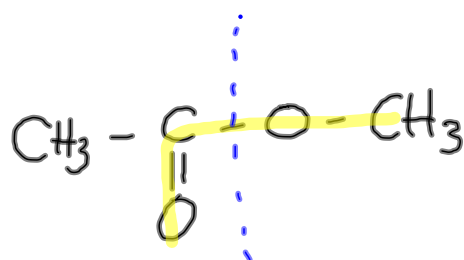
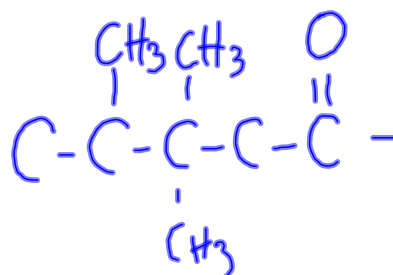
Worksheet 48



⑧ trimethyl-3-pentanone

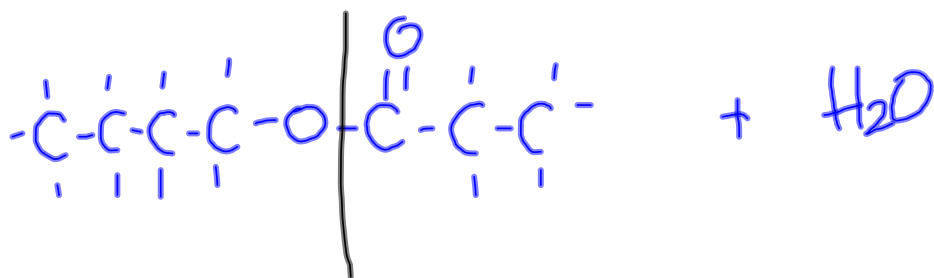
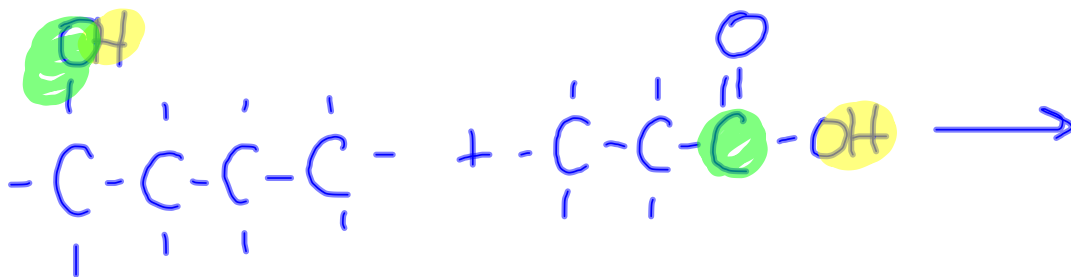


3,3,4-trimethylpentanal



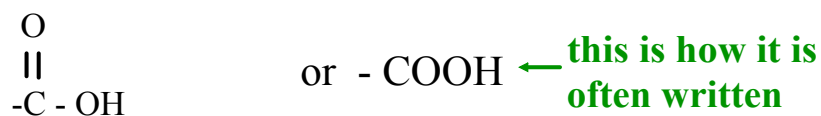
methyl ethanoate

1-butanol + propanoic acid \rightarrow butyl propanoate + water



Carboxylic Acids

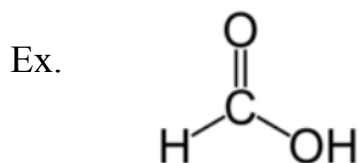
Carboxylic Acid - contain a carbonyl and a hydroxyl functional group together (**carboxyl group**)



- small carboxylic acids mix with water but large carboxylic acids do
- give a positive litmus test (blue to red).

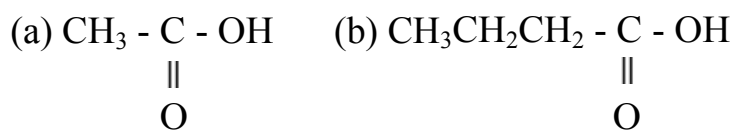
Naming

- carboxylic acids are named by replacing the "e" in the alkane name by oic and adding acid.
- compounds with more than one carboxyl group are usually identified with a common name.



methanoic acid

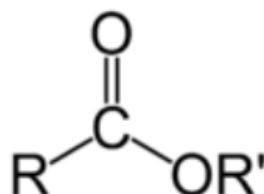
SAMPLE PROBLEM - Name the following:



(c) propanoic acid (d) pentanoic acid

Esters

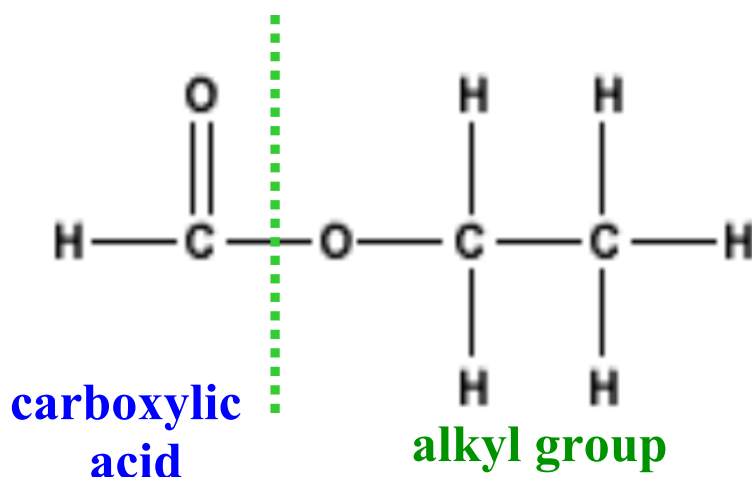
General Formula for ester:



-the functional group is similar to the carboxylic acid functional group but with the H of the carboxyl group replaced with a hydrocarbon branch (R)

Naming esters - two parts

- I. name the alkyl group in the alcohol used in the esterification.
- II. name of the acid but change the " oic acid " to oate.



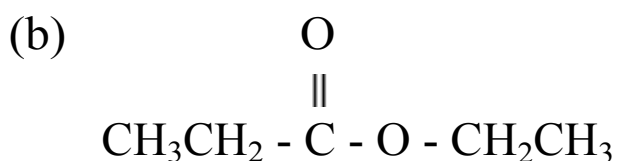
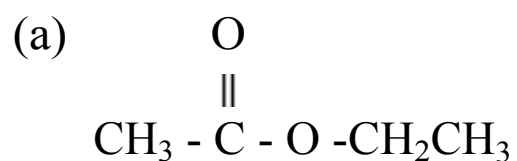
ethyl methanoate

Uses of Esters

Esters are often used as adhesives, perfumes, flavourings and painkillers.

Esters

Name the following



Draw condensed structural diagrams for the following.

(c) pentyl methanoate

(d) methyl butanoate

Esters Worksheet