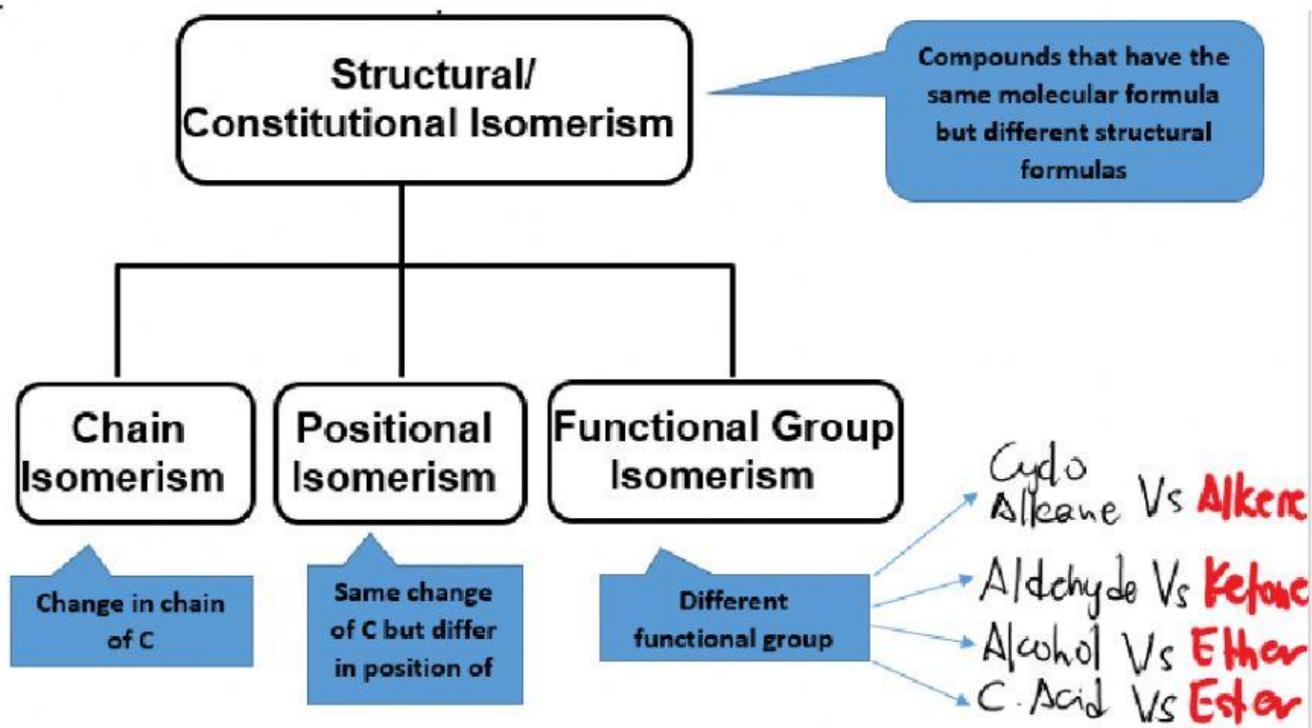
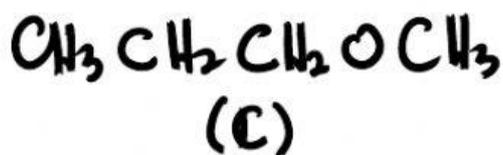
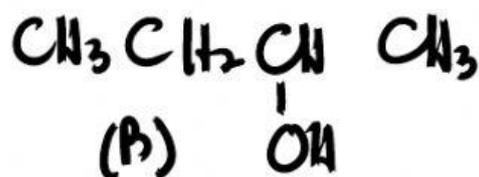
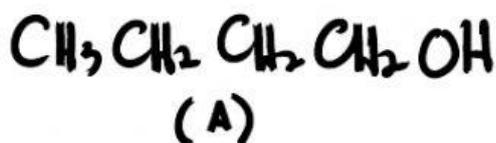


Exercise 1: Isomerism

1. The compounds below show the possible isomers of  $C_4H_{10}O$ .

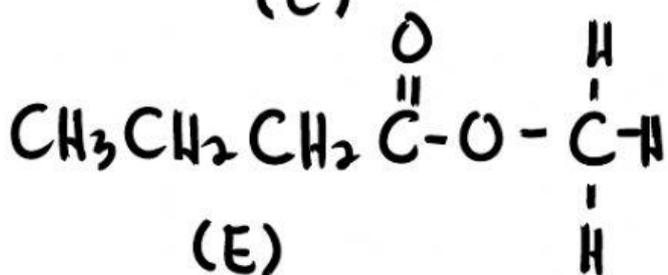
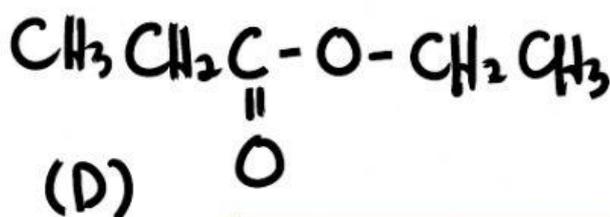
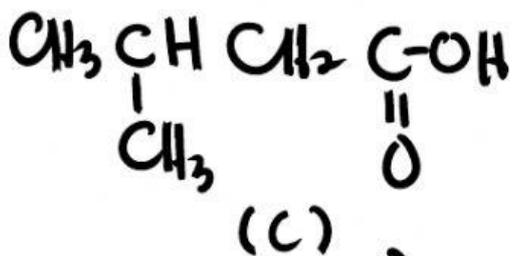
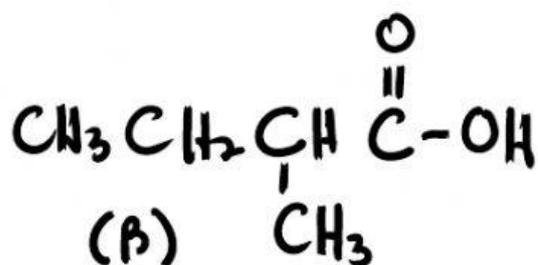
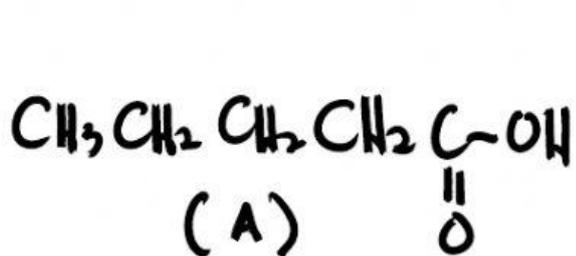


(a) Select which isomers are chain isomers A and \_\_\_\_\_ or  
B and \_\_\_\_\_

(b) Select which isomers are positional isomers. \_\_\_\_\_ and \_\_\_\_\_

(c) Select which isomers are functional isomers. A and \_\_\_\_\_ or  
B and \_\_\_\_\_ or  
D and \_\_\_\_\_

2. The compounds below show the possible isomers of  $C_5H_{10}O_2$ .



Change the **position of the functional group** but retain the C chain

- a) Select which isomers are chain isomers A and \_\_\_\_\_
- b) Select which isomers are positional isomers. \_\_\_\_\_ and \_\_\_\_\_
- c) Select which isomers are functional isomers. A and \_\_\_\_\_ or

B and \_\_\_\_\_ or

C and \_\_\_\_\_ or

A and \_\_\_\_\_ or

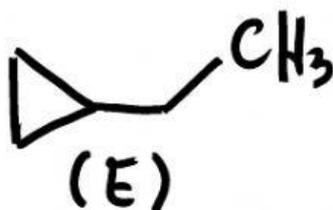
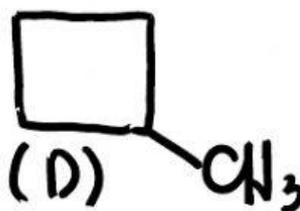
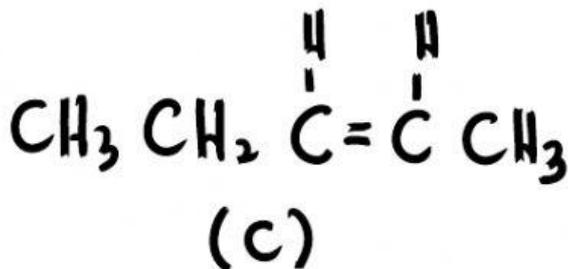
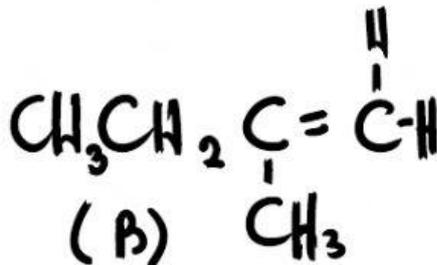
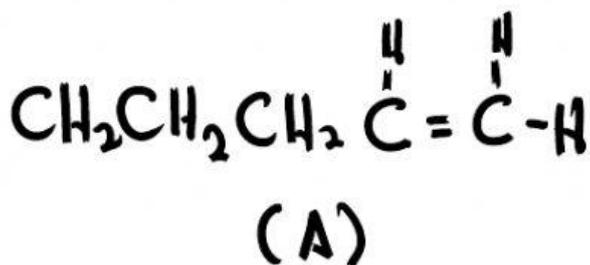
B and \_\_\_\_\_ or

C and \_\_\_\_\_

**Functional group isomers:**  
Compare different functional groups

Any carboxylic acids  
vs  
Any Ester

3. The compounds below show the possible isomers of  $C_5H_{10}$



d) Select which isomers are chain isomers

  A   and        or

  C   and        or

  D   and       

e) Select which isomers are positional isomers.        and       

f) Select which isomers are functional isomers.   A   and        or

  B   and        or

  C   and        or

  A   and        or

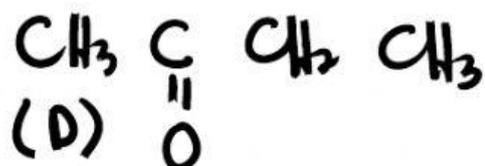
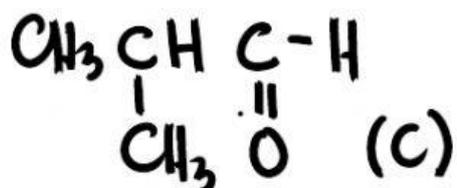
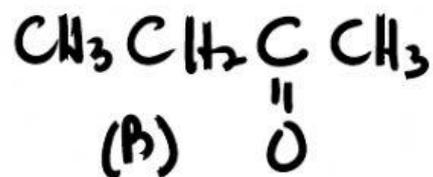
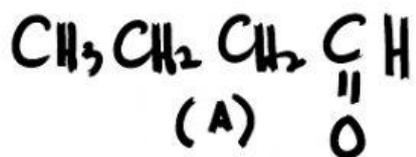
  B   and        or

  C   and       

**Functional Group Isomers:**  
Always compare different  
functional groups

Any Cycloalkanes  
Vs  
Any Alkenes

4. The compounds below show the possible isomers of  $C_4H_8O$ .



g) Select which isomers are chain isomers \_\_\_\_\_ and \_\_\_\_\_

h) Select which isomers are functional isomers.   A   and \_\_\_\_\_ or

  A   and \_\_\_\_\_ or

  C   and \_\_\_\_\_ or

  C   and \_\_\_\_\_

There are no  
positional  
isomers for  
 $C_4H_8O$ ???



Position for Carbonyl  
functional group for  
Aldehyde always be at  
the 1<sup>st</sup> Carbon

