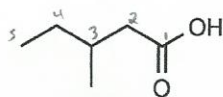
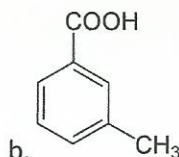


- Write the R formula for carboxylic acids  $\text{R}-\overset{\text{O}}{\parallel}\text{COH}$  or  $\text{RCOOH}$
- Write three acid properties of carboxylic acids.
  - Arrhenius acids: produce  $\text{H}_3\text{O}^+$  in solution ( $\text{H}^+$ )
  - react w/ bases to form a salt and water
  - weak acids dissociate very little
- Carboxylic acids are **strong / weak** acids.
- What do  $\beta$ ,  $\gamma$ , and  $\alpha$  refer to for carboxylic acids?
  - $\beta$ : branching on carbon 3
  - $\gamma$ : branching on carbon 4
  - $\alpha$ : branching on carbon 2
- Name the following carboxylic acids.



or 3-methylpentanoic acid  
 $\beta$ -methylpentanoic acid



3-methylbenzoic acid

- b.  $\text{CH}_3\text{CH}_2\text{CH}(\text{CH}_3)\text{CH}(\text{CH}_3)\text{COOH}$  2,3-dimethylpentanoic acid or  $\alpha, \beta$ -dimethylpentanoic acid

- Draw the following carboxylic acids.

a. Acetic acid  $\text{CH}_3\overset{\text{O}}{\parallel}\text{COH}$  (ethanoic acid)

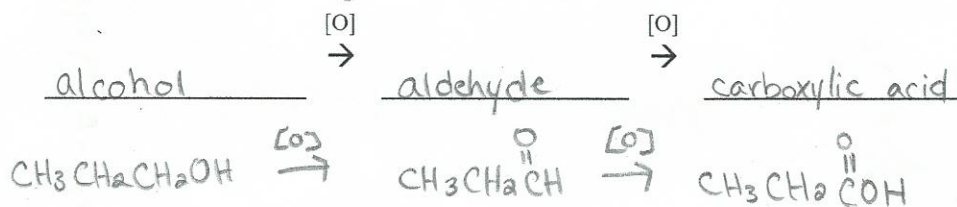
b. Formic acid  $\text{H}-\overset{\text{O}}{\parallel}\text{COH}$  (methanoic acid)

c.  $\beta$ -hydroxybutanoic acid

d.  $\alpha, \gamma$ -diethyloctanoic acid

- How are carboxylic acids formed? Give an example.

the oxidation of primary alcohols



- Oxidize propanol.  $\uparrow$