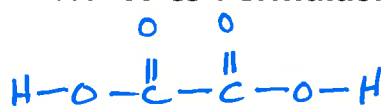


Even More Practice on Structures & Formulas!

KEY

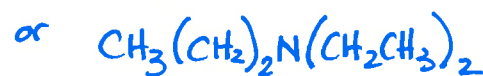
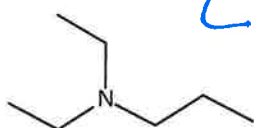
1. Redraw in the style as indicated.

(a) Draw in expanded style: $\text{HO}_2\text{CCO}_2\text{H}$

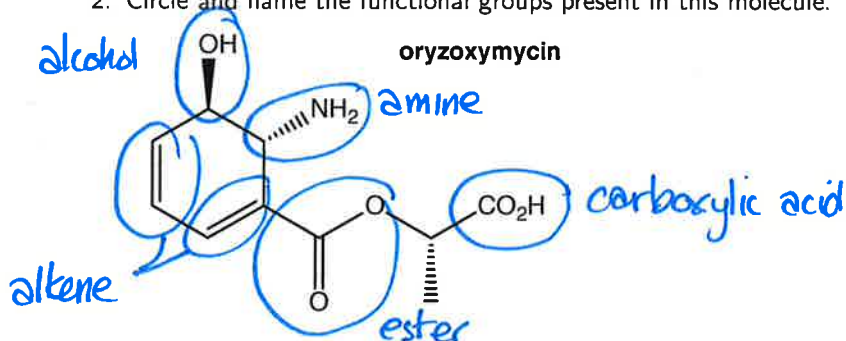


↳ 2 carboxylic acids connected together

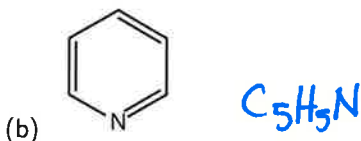
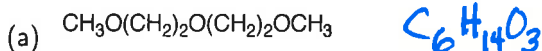
(b) Draw as a condensed formula:



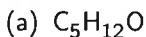
2. Circle and name the functional groups present in this molecule.



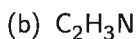
3. Give the molecular formula for each of these molecules.



4. Calculate the IHD and draw three isomers for each formula.



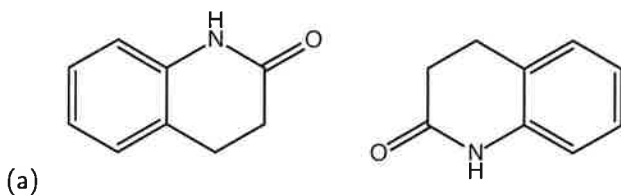
$$\text{IHD} = 5 - \frac{1}{2}(12) + 1 = 0$$



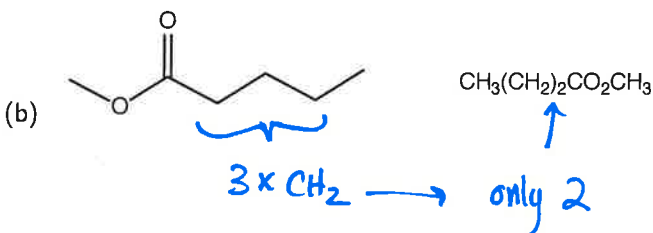
$$\text{IHD} = 2 - \frac{1}{2}(3) + \frac{1}{2}(1) + 1 = 2$$



5. For each pair below, state whether the two representations are the same molecule, or different molecules.



same (flip around both horizontal & vertical axes)



different
(formula is different)