

More Practice on Structures & Formulas

1. Redraw in the style as indicated.

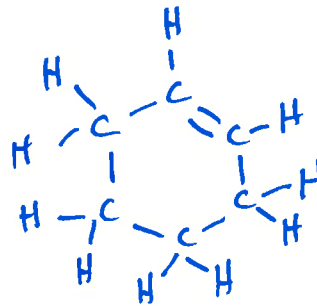
(a) Draw in bond-line style: $\text{CH}_3\text{CH}_2\text{CO}_2\text{CH}_3$



(b) Draw as a condensed formula:

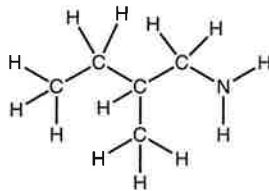


(c) Draw in expanded style:

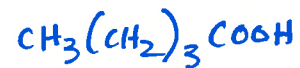
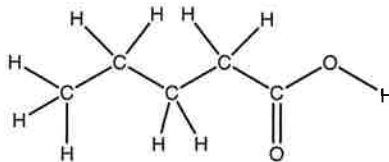


could also give yourself on the functional groups that are present

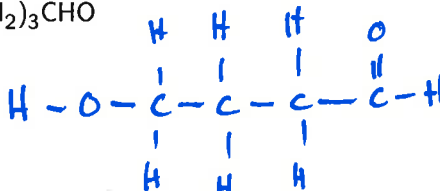
(d) Draw in bond-line style:



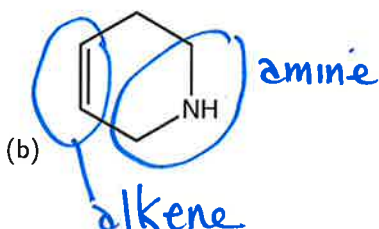
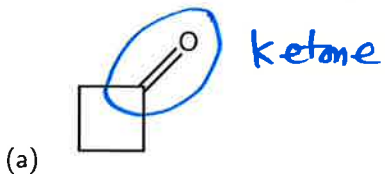
(e) Draw as a condensed formula:

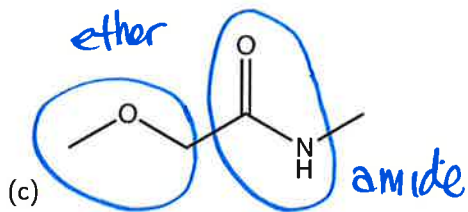


(f) Draw in expanded style: $\text{HO}(\text{CH}_2)_3\text{CHO}$

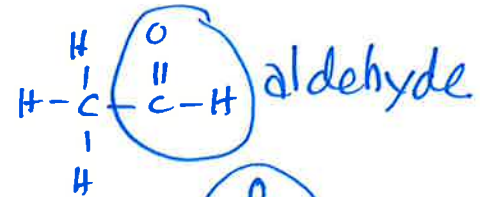


2. Circle and name the functional groups present in these molecules.

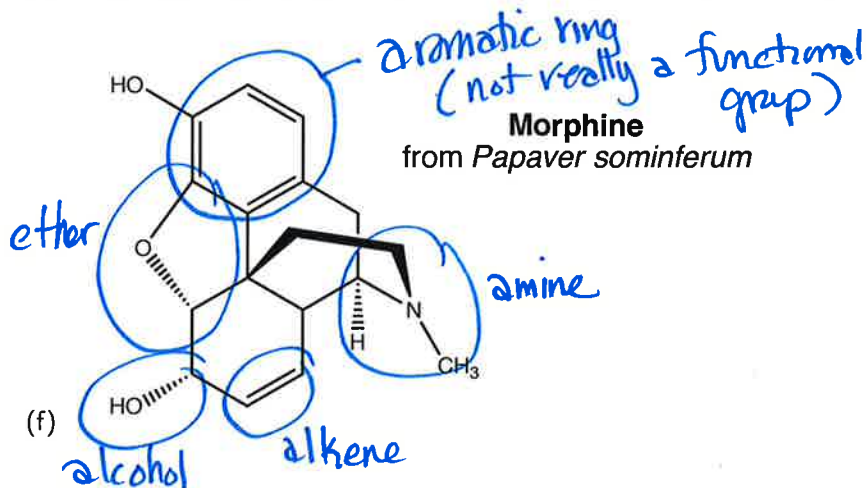




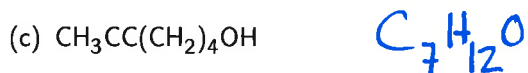
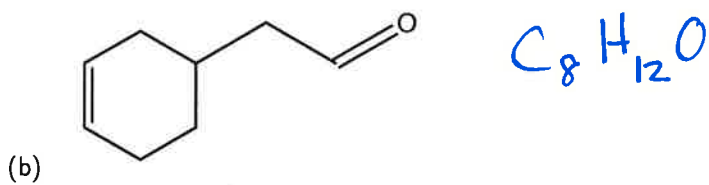
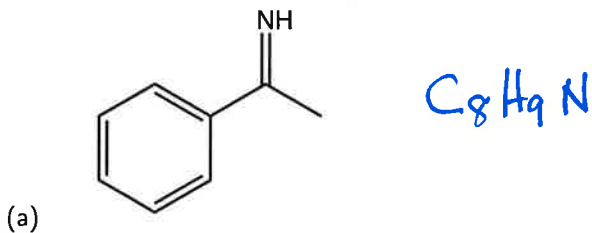
(d) CH_3CHO (you may wish to write this out in another form first)



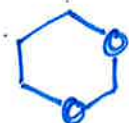
(e) $\text{CH}_3(\text{CH}_2)_2\text{CO}_2\text{CH}_3$ (you may wish to write this out in another form first)



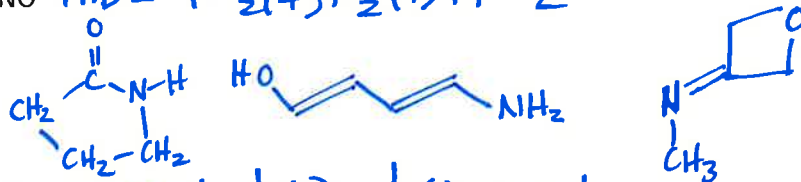
3. Give the molecular formula for each of these molecules.



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



(b) C_4H_7NO $IHD = 4 - \frac{1}{2}(7) + \frac{1}{2}(1) + 1 = 2$

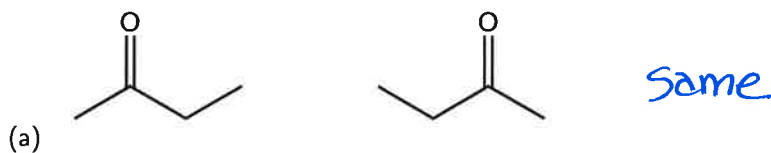


(c) C_4H_9N $IHD = 4 - \frac{1}{2}(9) + \frac{1}{2}(1) + 1 = 1$



additional answers are possible / these are not the only right ones

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



same = same molecular formula & same connectivity

