Answers to the organic chem classwork

This is to use in class.

Do not write on it.

Do not take this out of the room.









- 1. Addition: 2pentene + Br₂ into 2,3 dibromopentane
- 2. Substitution: propane + Cl_2 form 2chloropropane + HCl
- 3. Polymerization: tetrafluoroethene forms polytetrafluoroethane
- 4. Fermentation of GLUCOSE ($C_6H_{12}O_6$) into 2 products. Make sure to show yeast + water by the arrow.
- 5. Esterfication of 1-propanol and pentanoic acid forms propyl pentanoate
- 6. Saponification: write a word equation, not the structural molecules.



SCENT	Circle the Functional Groups ONLY in these STRUCTURAL FORMULAS	Name all Functional Groups in each molecule
banana	CH ₃ -O-C-(CH ₂) ₄ CH ₃	Ether Methyl hexanoate
caraway (rye bread)	$ \begin{array}{c} $	Ketone 16 H atoms "hiding" in the shortcut drawing
cinnamon		Aldehyde
coconut		Ester 8 carbon atoms, each corner, and each "end"
geraniums (flowers)	OH 	Alcohol

SCENT	Circle the Functional Groups ONLY in these STRUCTURAL FORMULAS	Name all Functional Groups in each molecule
hyacinth (flowers)	OH	alcohol
jasmine	$CH_2 - CH_2 - CH_3$	Ester
licorice	$H = C = C = C = C + O = CH_3$	Ether
mushroom	OH $CH_2=CH-CH-(CH_2)_4-CH_3$	Alcohol 16 H atoms in total (count the parentheses first, it's easier)
orange	$C_8H_{17} - O - C - CH_3$	Ester Octyl ethanoate
peach	$\begin{array}{c} 20 \\ 0 \\ 0 \\ 0 \\ 12 \\ 15 \end{array}$	Ester 20 H atoms in total (count the parentheses first, it's easier)





Homologous Series Name	general formula n = number of carbon atoms	EXAMPLES		
		Name (4 Carbon chains)	Structural Diagrams with all hydrogen atoms showing And condensed structural formulas	
alkanes	C _n H _{2n+2}	propane	$\begin{array}{cccc} H & H \cdot H \\ I & I & I \\ H - C - C - C - C - H \\ I & I & I \\ H & H & H \end{array} CH_3CH_2CH_3$	
alkenes	C_nH_{2n}	propene	$H = \begin{bmatrix} H & H \\ 0 & -C \end{bmatrix} = C = H C H_3 C H C H_3$	
alkynes	C _n H _{2n-2}	propyne	$H - C \equiv C - C - H - C H CHCCH_3$	









Draw and label the structural diagrams for propanoic acid and for ethanol, and the two products. Circle the OH and the H that makes the water. NAME both products that form.

