1. What is the difference between aldehydes and ketones? Write the R-formulas to show this.
2. Aldehydes and ketones are **unsaturated** / **saturated.**
3. What is the molecular formula for aldehydes and ketones?
4. What is the name of the group that defines aldehydes and ketones? List characteristics of it.
5. Name or draw the following molecules.
	1. CH3CH2CH(CH3)CHO \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	2.  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	3. 4-ethyl-3-methyloctanal \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	4.  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. Name or draw the following molecules.
	1. 3,3-dimethyl-2-hexanone \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	2. CH3CH2(CO)CHClCH3 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	3.  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	4. CH3CH=CHCH2CH(CO)CH2CH3 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
7. Draw and name some isomers with the formula C5H10O.
8. Which of the following will not have the formula C6H12O?
	1. 4-hexen-2-ol c. 3-methylhexanal
	2. 2,3-methylcyclobutanol d. 2,4-dimethyl-3-pentanone
9. Secondary alcohols will oxidize to
	1. Aldehydes c. alkenes
	2. Esters d. ketones
10. Write the molecular formula for the following molecules:
	1. Octanal \_\_\_\_\_\_\_\_\_\_\_
	2. 3-methyl-2-pentanone \_\_\_\_\_\_\_\_\_\_\_
11. Oxidize the following reactions. Draw and give the name.

 [O]

* 1. 3-ethyl-1-octanol 🡪

 [O]

* 1. 3-methyl-3-hexanol 🡪

[O]

* 1. 3-ethyl-2-octanol 🡪
1. Reduce the following reactions. Draw and give the name.

Pt

* 1. Butanal + H2 🡪

Pt

* 1. 2-pentanone + H2 🡪
1. What type of alcohol oxidizes to form aldehydes?
2. What type of alcohol oxidizes to form ketones?
3. Aldehydes reduce to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. Ketones reduce to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_