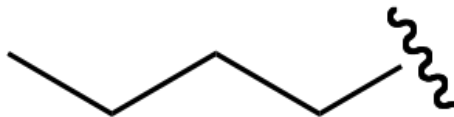
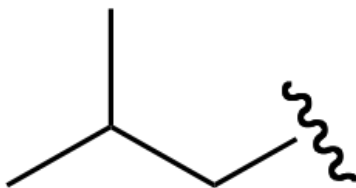
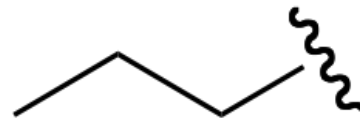
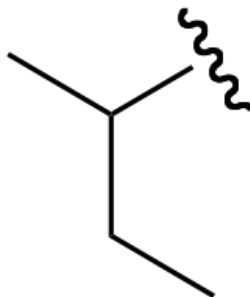
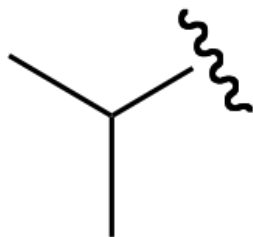


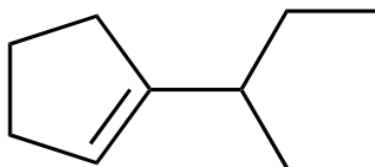
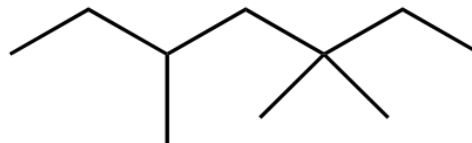
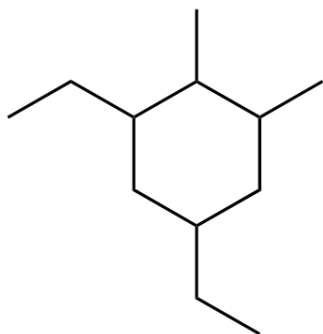
Completed in class

Name each substituent.

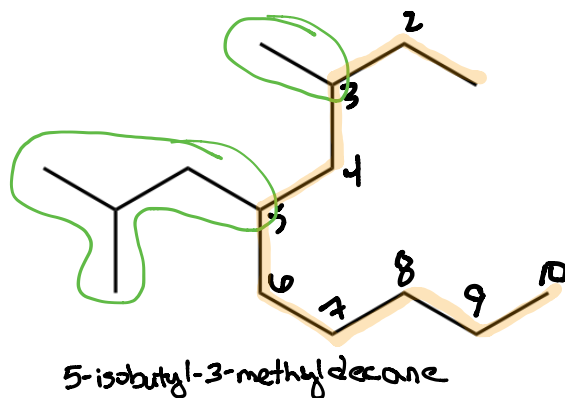
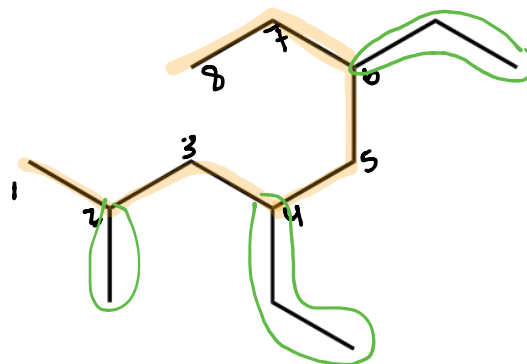
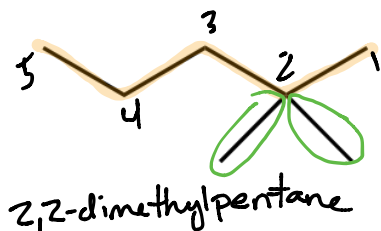


Identify each type of carbon.

Completed in class

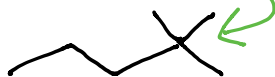


Name the alkanes.



What's wrong with each name? How would you fix it?

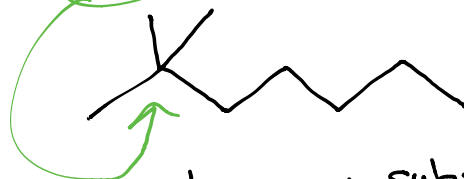
4,4-dimethylpentane



→ Should be 2,2... not 4,4!

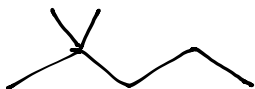
→ See previous slide

1,1,1-trimethylheptane



→ too many substituents
1,1-dimethylheptane

2,2-methylpentane

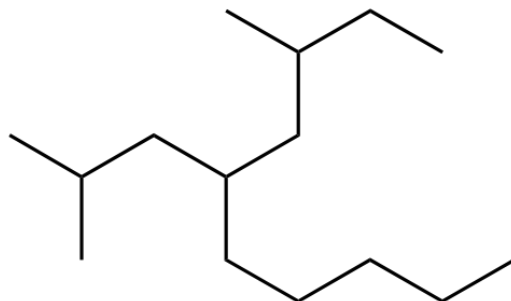


→ should be dimethyl

2-dimethylpentane

→ not enough #'s
→ should be 2,2-...

What's wrong with these names?



6-ethyl-2-methyl-4-pentyloctane

not longest chain ↙

3-methyl-5-isobutyldecane

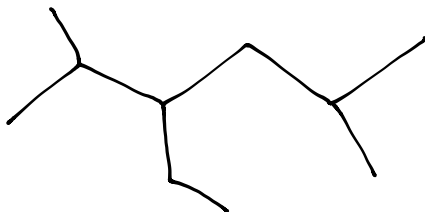
↳ substituents not alphabetical

Draw the structure for each name.

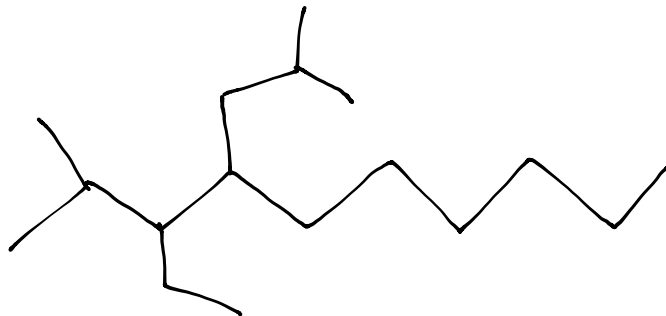
2,2,3-trimethylpentane



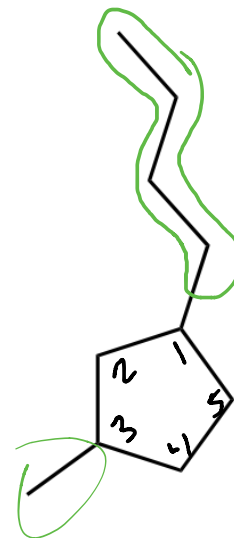
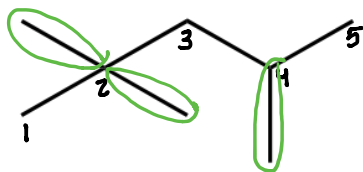
3-ethyl-2,5-dimethylhexane



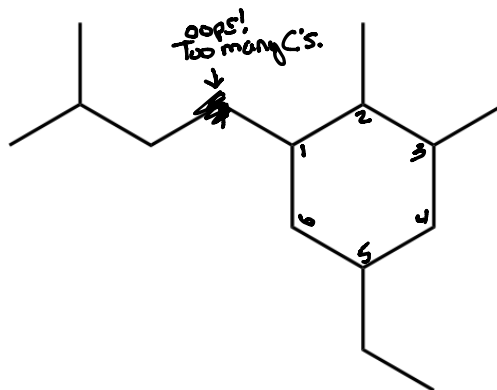
3-ethyl-4-isobutyl-2-methyldecane



Name the molecules.



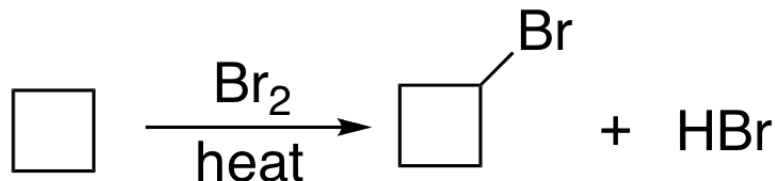
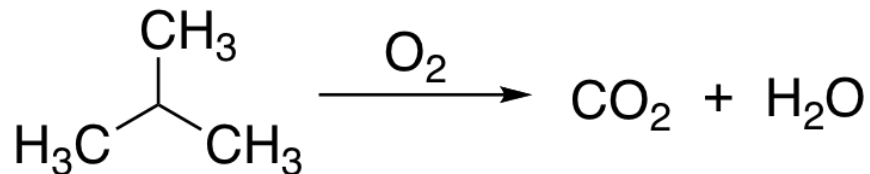
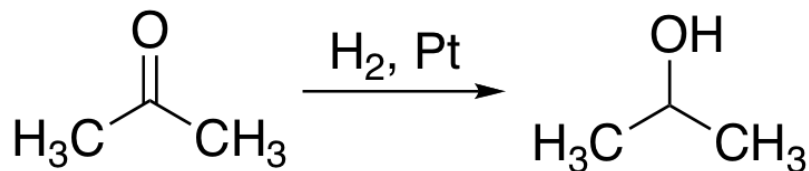
1-methyl-3-butylcyclopentane



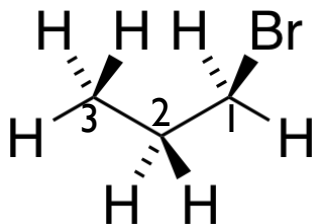
1-isobutyl-2,3-dimethyl-5-ethylcyclohexane

Determine whether each reaction is
oxidation/reduction.

completed in class



Build a model of 1-bromopropane.
Arrange your model to look like this
drawing.



1 Newman C1-C2
(1 in front) 2
(2 in front)

completed

in
class

Choose one of your Newmans & rotate to
find the highest & lowest energy
conformers.

lowest

highest

3 4
Redraw the two structures on the left
as 3-D representations.

How do you know which bond to look down?

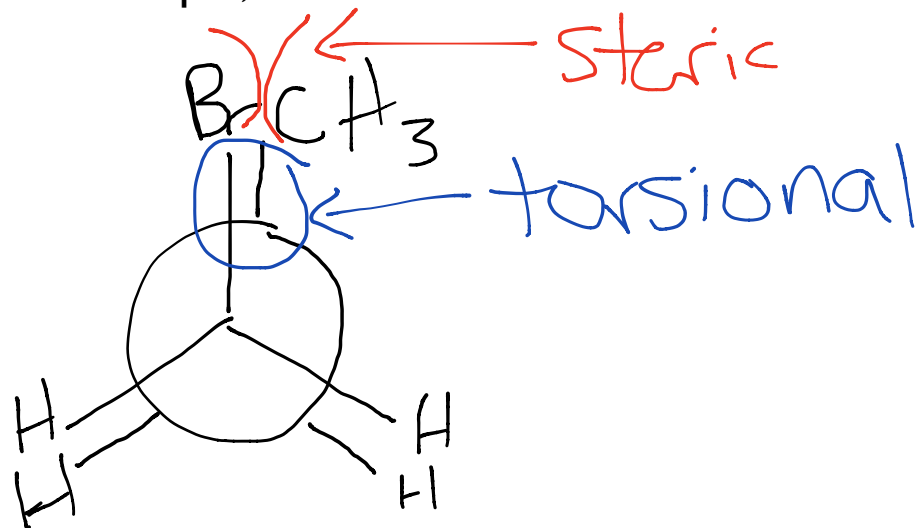
How do you know which carbon to make front and which to make back?

How do I know which direction to rotate?

completed
in
class

How do I go back and forth between skeletal/3-D drawing & Newmans?

Using the 1-bromopropane example, draw illustrations of torsional strain and steric strain.



Draw an example of angle strain.



bond angles not usual
 $\sim 109.5^\circ$ for sp^3 -C

