



Course Name: CHEM 3013: Organic Chemistry Professor/Teacher: Dr. Bolliger

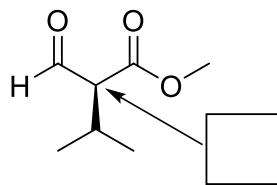
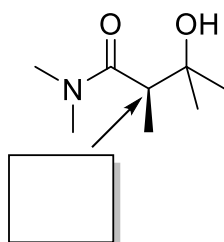
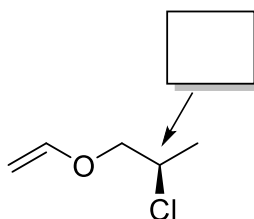
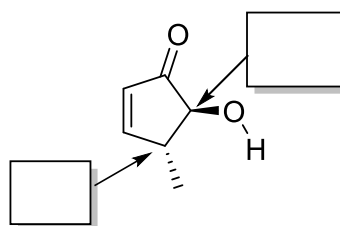
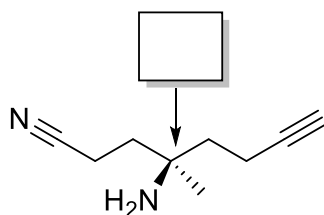
Title of Homework: Homework 2

Name: \_\_\_\_\_ English Name: \_\_\_\_\_

SWJTU ID: \_\_\_\_\_ OSU ID: \_\_\_\_\_ Date: Tuesday, 13 April 2021

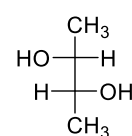
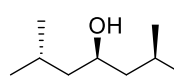
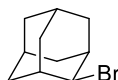
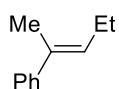
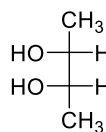
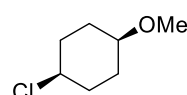
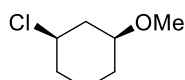
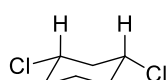
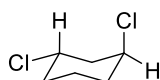
**Question 1** (3P)

Assign the absolute configuration to the following stereocenters.



**Question 2** (3P)

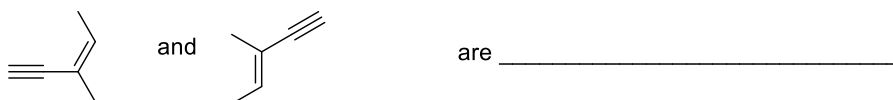
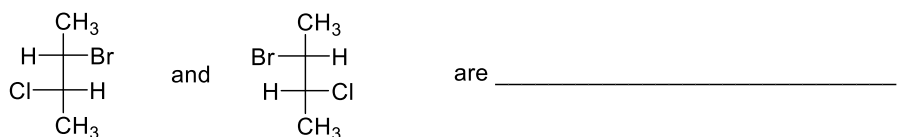
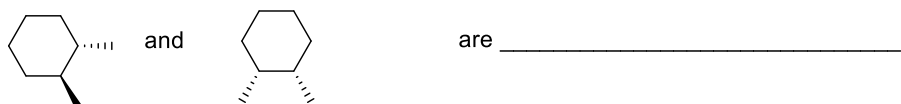
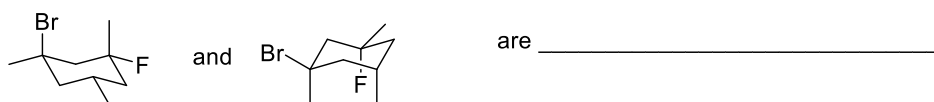
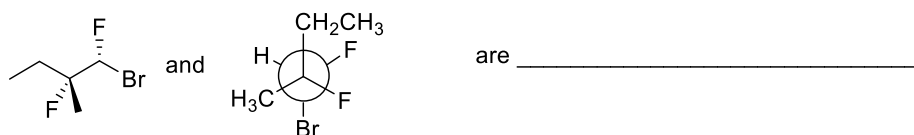
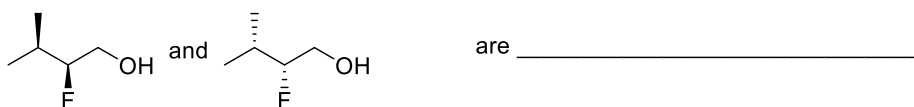
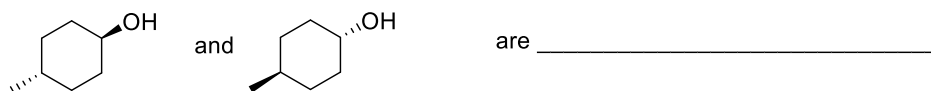
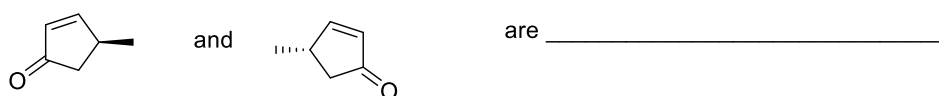
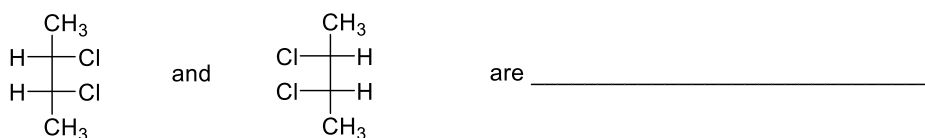
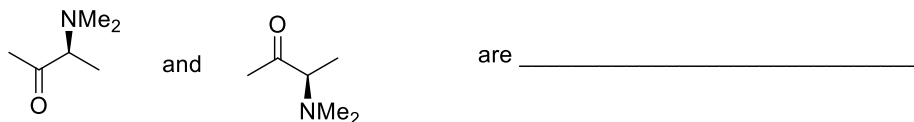
Circle all chiral molecules.





### Question 3 (3P)

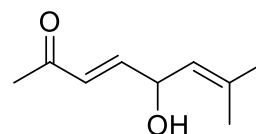
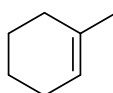
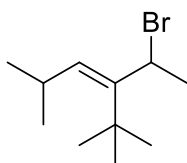
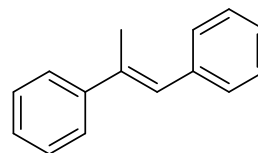
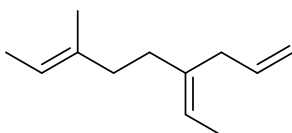
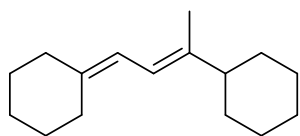
What is the relationship between the following pairs of molecules (Options: Identical Molecules (incl. Conformers, Meso Compounds), Enantiomers, Diastereomers, Constitutional Isomers)?





**Question 4** (3P)

Label all the alkenes with *E* or *Z* where appropriate. For some alkenes you may not be able to determine *E* and *Z* in which case you should leave them without label.



**Question 5** (3P)

Draw these molecules.

a) But-3-en-1-ol

b) 3-Ethyl-3-methyl-1-pentyne

c) (6*E*)-2,6-Dimethyl-2,6-octadiene