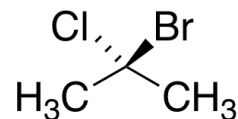
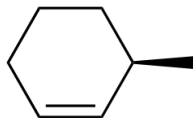
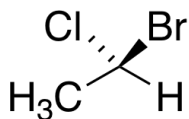


Enantiomers?

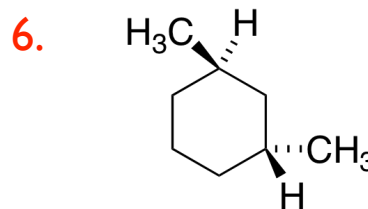
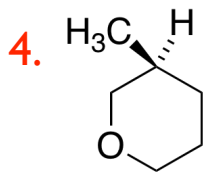
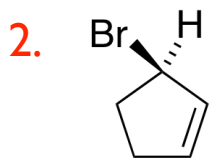
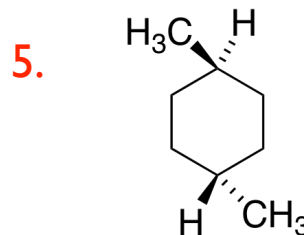
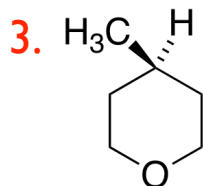
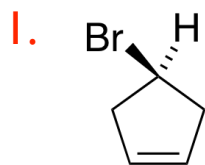
Every molecule has a mirror image. Does every molecule have an enantiomer? Draw the mirror image of each molecule and determine whether the two drawings represent enantiomers. Models are very helpful here!



completed in class

Chiral or Achiral?

- A. Chiral
- B. Achiral
- C. Both
- D. Neither
- E. No Idea



completed in
class

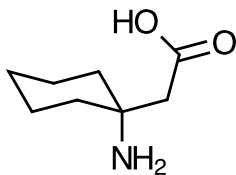
Absolute Configuration

Assign R or S to stereocenters in every chiral molecule in the previous two problems.

Completed in class

Gabapentin

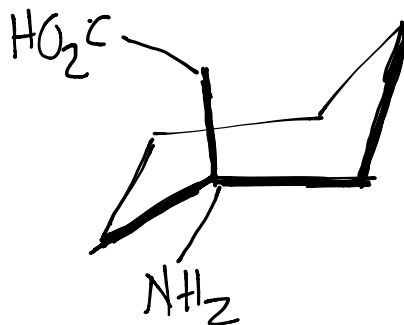
- Gabapentin is drug used to treat epilepsy and nerve pain.



Chiral or achiral?

Completed
in class

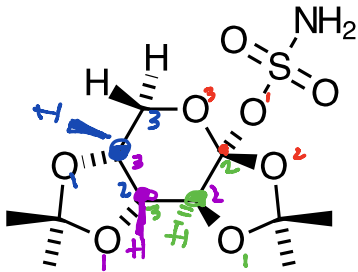
Draw the ring-flipped conformer.



• Note shading on ring. Not necessary, but can be helpful for visualization.

Topiramate

- Topiramate is also used to treat nerve pain.



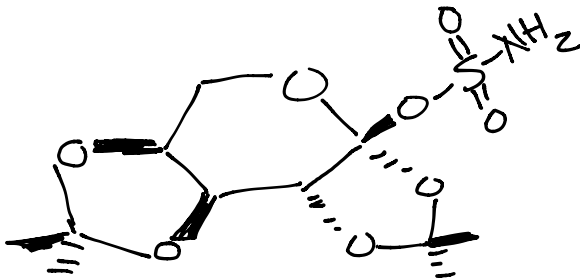
Identify all stereocenters.

completed in class

Assign all stereocenters as R or S.

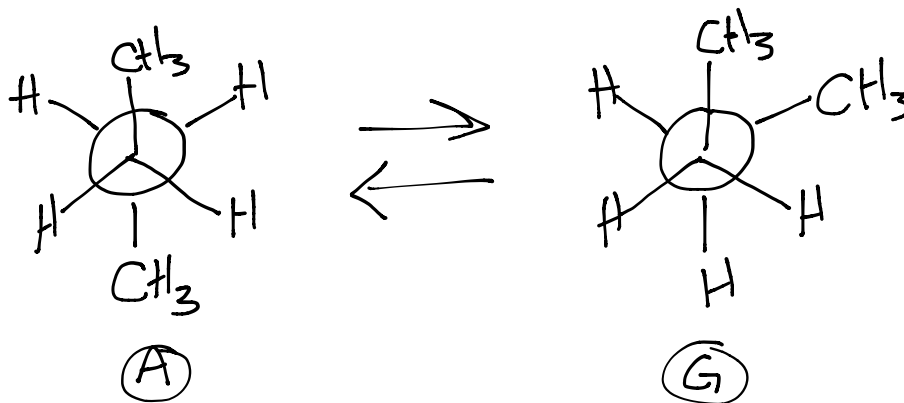


Draw the enantiomer.



Challenge

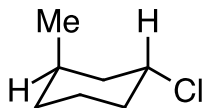
- At room temperature the *anti* conformer of butane is more stable than the *gauche* conformer by a little less than 1 kcal/mole. This leads to an equilibrium constant of about 4.6 favoring the *anti* isomer. As the temperature is raised, will the value of the equilibrium constant increase or decrease? Explain.



$$K_{eq} = \frac{[A]}{[G]} = 4.6$$

• K_{eq} will decrease.
→ why?

Assign stereocenter configuration



Completed in class.

- A. 1R, 2R
- B. 1R, 2S
- C. 1S, 2S
- D. 1S, 2R
- E. Achiral