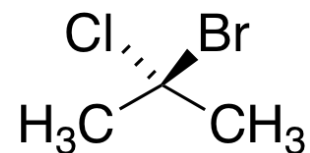
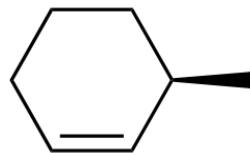
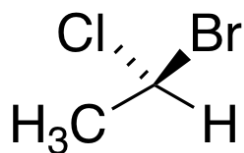


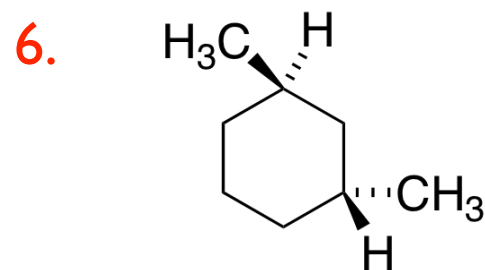
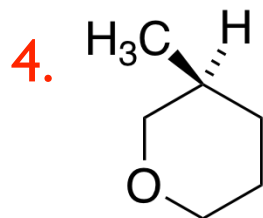
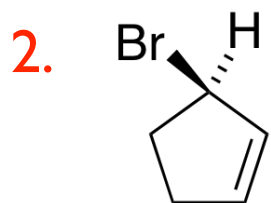
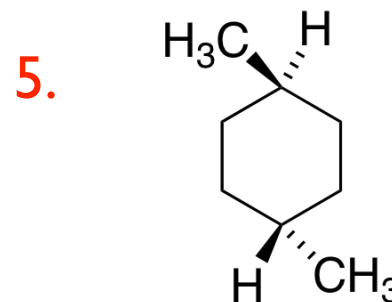
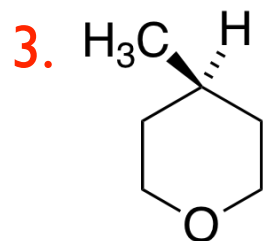
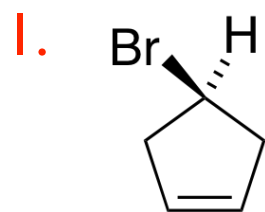
Enantiomers?

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!



Chiral or Achiral?

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

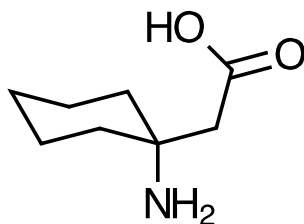


Absolute Configuration

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

Gabapentin

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

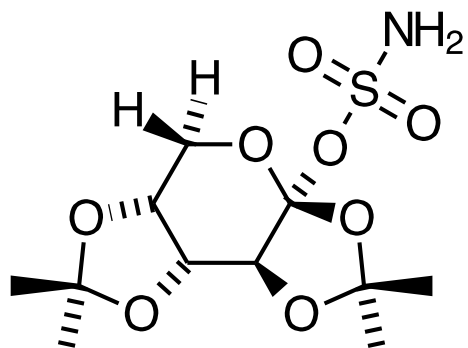


Draw the ring-flipped conformer.

Chiral or achiral?

Topiramate

- Topiramate is also used to treat nerve pain.



Identify all stereocenters.

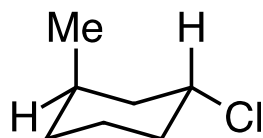
Assign all stereocenters as R or S.

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.

Assign stereocenter configuration



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