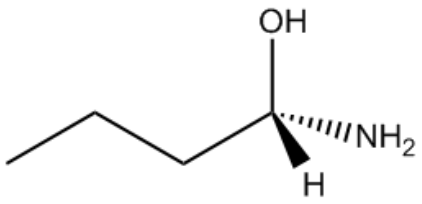
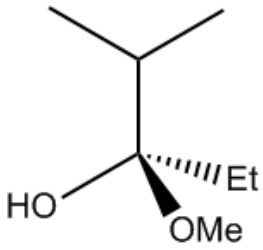
CONCEPT: R AND S CONFIGURATION

According to IUPAC protocol, each molecule must have a unique, unambiguous name – even stereoisomers.

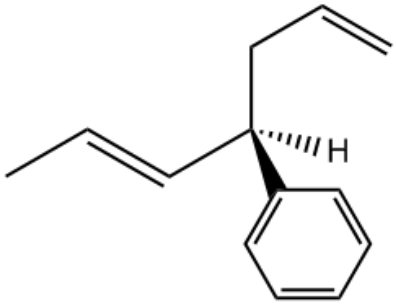
Step 1. Assign priorities to the four atoms on the chiral center according to their atomic mass on the periodic table.



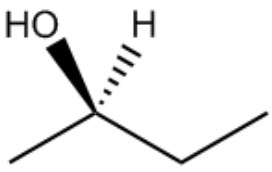
Step 2. When there is a tie between atomic weights, compare the next set of adjacent atoms (playoffs!).



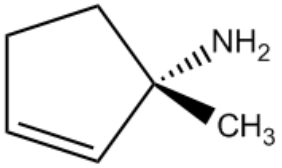
Step 3. Double bonds count twice. Triple bonds count three times.



EXAMPLE: Determine priorities for the following chiral center:

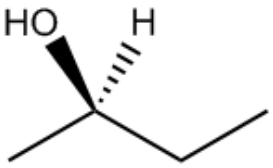


EXAMPLE: Determine priorities for the following chiral center:



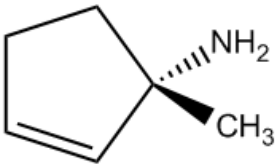
Step 4. IF the last priority group is **in the back**, then trace a path from _____ to _____ priority.

- Clockwise = _____, Counterclockwise = _____ □ ***Always Ignore group 4***

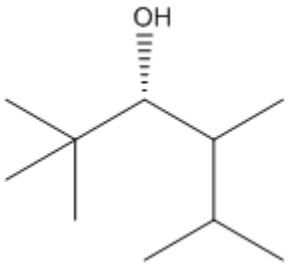


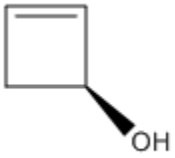
Step 5. If the last priority group is **NOT in the back**, _____ that group with the group that is on the dash.

- Trace path as always, but this time _____ the sign since you _____ groups.
  - ___ → ___
  - ___ → ___



PRACTICE: Provide the full name for the following molecules, taking stereochemistry into account.

a. 

b. 

c.