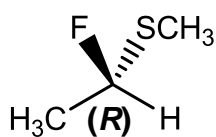


### Workshop 10 Solutions Achiral or Chiral?

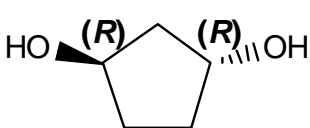
On the structures below, label every chiral center with its appropriate Cahn-Ingold-Prelog designation [(*R*) or (*S*)]. Make it clear which atom in the drawing you are labeling. (If there are no chiral centers, then don't label any.) Then, for each structure, circle whether you think the molecule is chiral or achiral.



**CHIRAL**

or

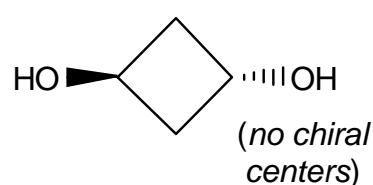
**ACHIRAL** ?



**CHIRAL**

or

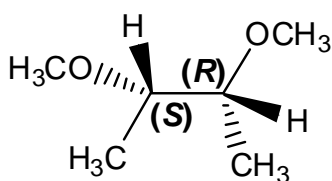
**ACHIRAL** ?



**CHIRAL**

or

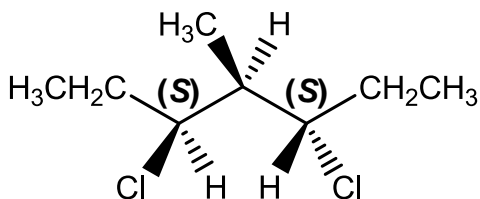
**ACHIRAL** ?



**CHIRAL**

or

**ACHIRAL** ?



**CHIRAL**

or

**ACHIRAL** ?