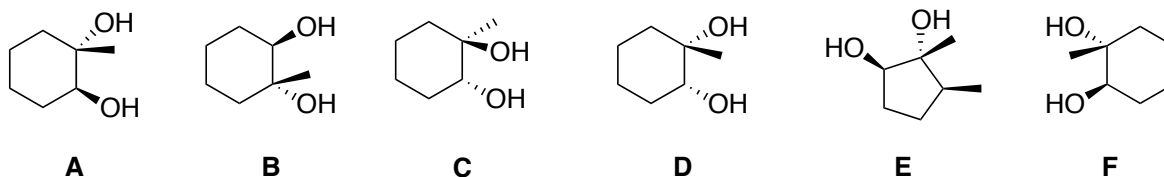


CHIRALITY

Stereoisomers or not? If so, what kind?

****Assign R/S configurations for each stereocenter in the following compounds****



Here's a trick: the normal way of assigning R/S requires the 4th priority to be behind the page. If the 4th priority is drawn in front of the page with a wedge, the configuration you assign is the opposite of how it looks. For example, if it looks like an R center with the 4th priority wedged, it is actually an S configuration.

Indicate whether the following pairs are enantiomers, diastereomers, constitutional isomers, the same compound, or not isomers. You've already done the hard part by assigning R/S.

- For a given pair below, number the carbons, name the compounds, and write the formula.
 - Constitutional isomers** – same molecular formula, and the name differs by more than the R/S designation.
 - Not isomers** – different molecular formula.
 - Enantiomers** – All of the R centers are S centers on the pair, and vice versa.
 - Diastereomers** – At least one of the chiral centers has the same R/S designation, but the others are different.
 - Same Compound** – Everything is the same!

A&B _____ A&C _____ A&D _____

A&E _____ A&F _____ B&C _____

B&D _____ B&F _____ C&D _____

C&F _____ D&F _____ E&F _____

A 50:50 mixture of A&F is called _____

The optical rotation value for this mixture is _____

What is the relationship between the optical rotations of A&F? _____

Which other pairs share this relationship? _____

What's the relationship between E and the rest of the compounds? _____