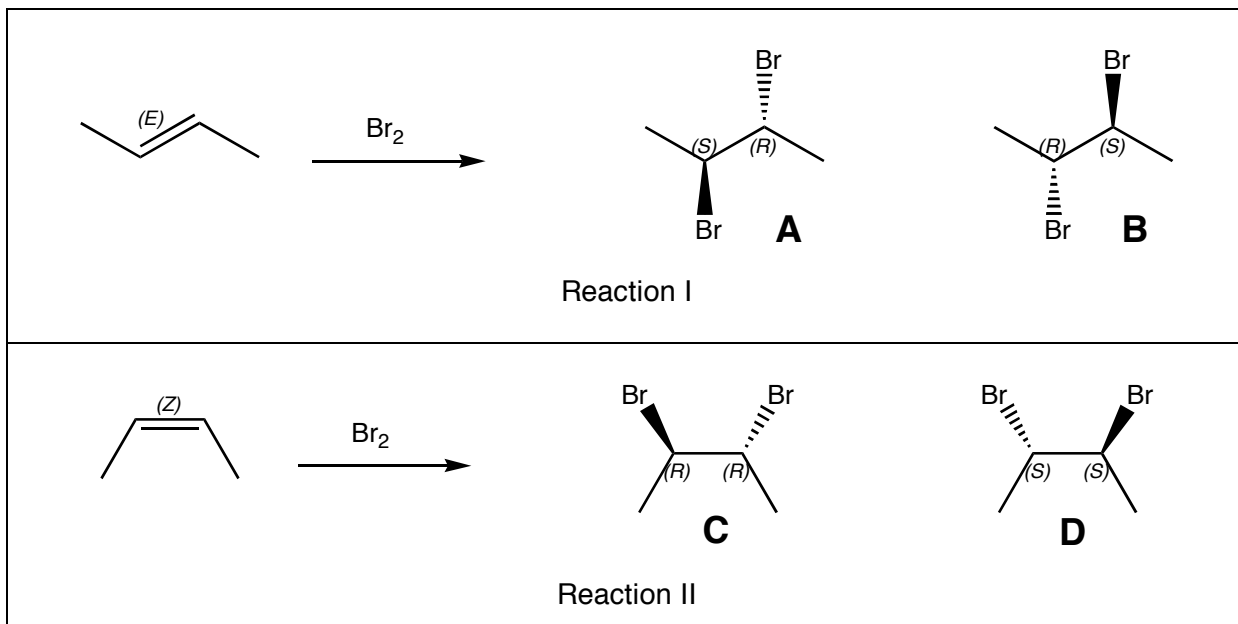


Quiz 3



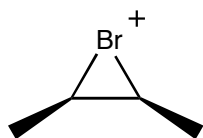
1. Place an asterisk next to all the chiral centers on all of the molecules.
2. Determine the configuration (their “*R*” or “*S*”-ness”) of all of the chiral centers.
3. What is the relationship between molecules A and B in Reaction I; that is, are they enantiomers (nonsuperimposable mirror images), diastereomers (nonsuperimposable molecules that are not mirror images), or are they the same molecule?

same molecule

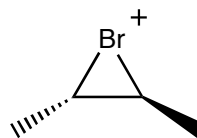
4. What is the relationship between molecule C and D in Reaction II; that is, are they enantiomers (nonsuperimposable mirror images), diastereomers (nonsuperimposable molecules that are not mirror images), or are they the same molecule?

enantiomers

5. Drawn below are the intermediates for the two reactions. Which intermediate belongs with which reaction?



Reaction II



Reaction I