

Questions 1 thru 4, 3 points each.

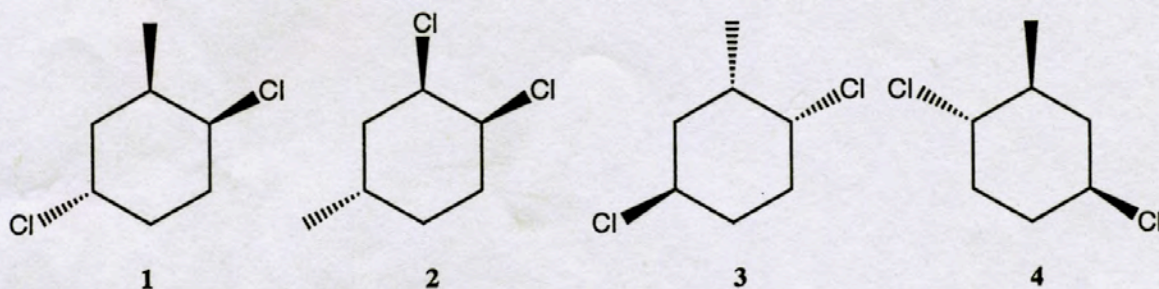


Figure 1

1. What is the relationship of compounds 1 & 2 in Figure 1?

- A. They are enantiomers.
- B. They are diastereomers.
- C. They are constitutional isomers.
- D. They are identical.

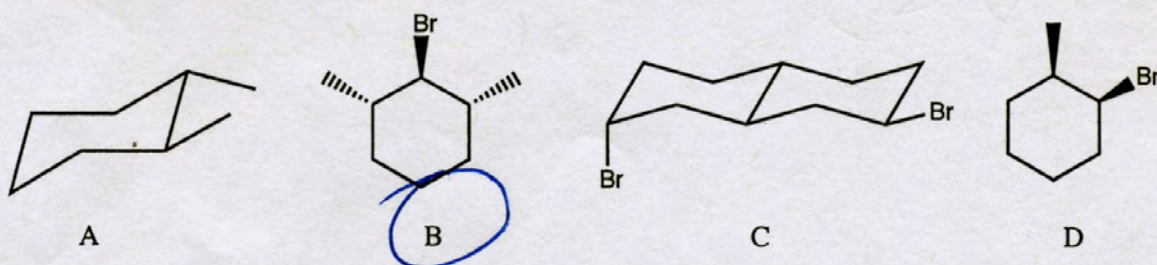
2. What is the relationship of compounds 1 & 3 in Figure 1?

- A. They are enantiomers.
- B. They are diastereomers.
- C. They are constitutional isomers.
- D. They are identical.

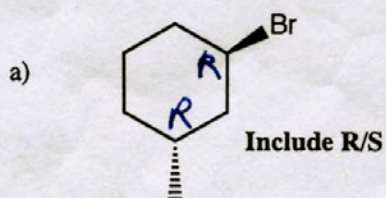
3. What is the relationship of compounds 1 & 4 in Figure 1?

- A. They are enantiomers.
- B. They are diastereomers.
- C. They are constitutional isomers.
- D. They are identical.

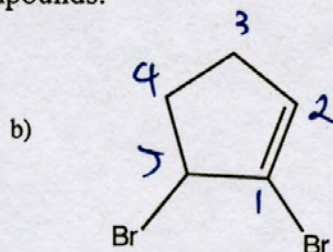
4. Which of the following molecules is NOT optically active?



5. (6 Points, 3 pts. Each) Name the following compounds:



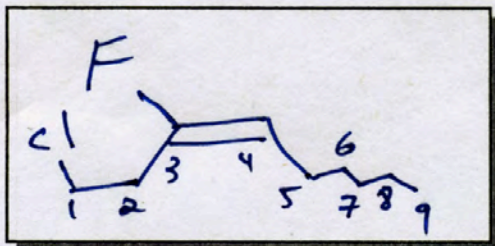
(1R,3R)-1-bromo-3-methylcyclohexane



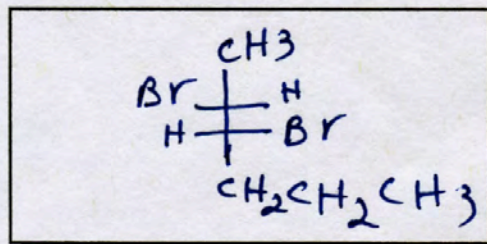
1,5-dibromocyclopentene

6. (6 Points, 3 pts. Each) Draw the structure for the following compounds:

b) E-1-Chloro-3-fluoro-3-nonene



b) Fisher projection of (2R, 3R)-2,3-dibromohexane



7 (1 Point) How many stereoisomers are there for 1,2-dibromocyclohexane?

- A) 1
- B) 2
- C) 3**
- D) 4
- E) 5
- F) 6