

CEM143, Quiz 3

Spring 2019

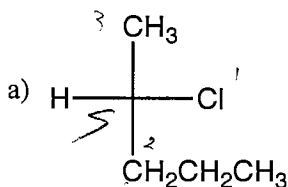
NAME:

Key

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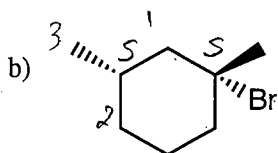
PID:

1) (6 Pts., 2 each) Provide the IUPAC name for each of the following compounds as instructed.



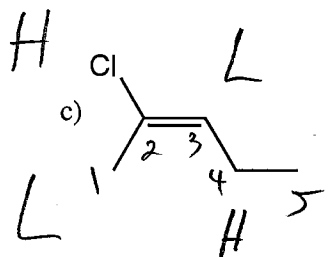
5-2-chloropentane

Include R/S configuration



(1S,3S)-1-bromo-1,3-dimethylcyclohexane

Include R/S configuration

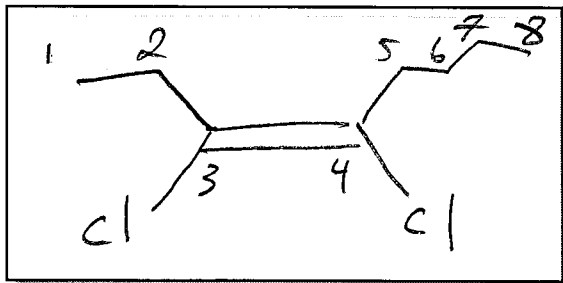


E-2-chloro-2-pentene

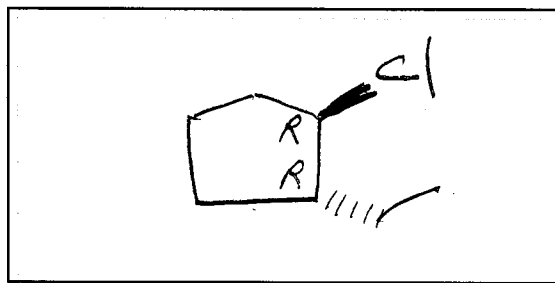
Include E/Z

2) (4 Pts, 2 each) Provide the structure for each of the following compounds:

a) Z-3,4-dichloro-3-octene



b) (1R,2R)-1-chloro-2-ethylcyclopentane



Q3

(10 Pts, 2 each) Use Figure 1 to answer questions 3 thru 7.

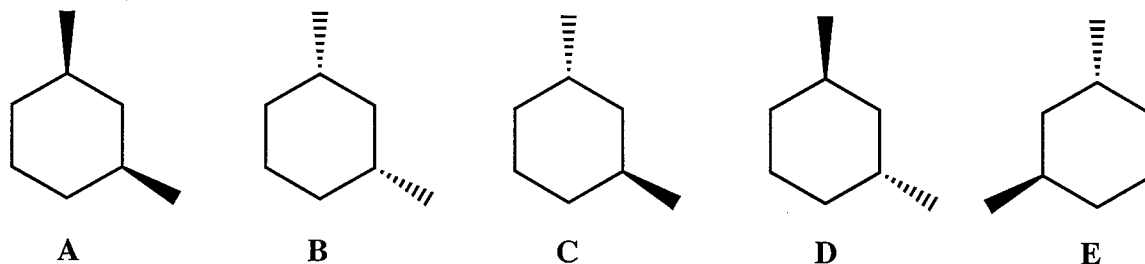


Figure 1

3) What is the relationship of Compounds A & B in Figure 1?

- A) Enantiomers
- B) Diastereomers
- C) constitutional isomers
- D) They are identical (the same molecule)

4) What is the relationship of Compounds A & C in Figure 1?

- A) Enantiomers
- B) Diastereomers
- C) constitutional isomers
- D) They are identical (the same molecule)

5) What is the relationship of Compounds C & D in Figure 1?

- A) Enantiomers
- B) Diastereomers
- C) constitutional isomers
- D) They are identical (the same molecule)

6) What is the relationship of Compounds D & E in Figure 1?

- A) Enantiomers
- B) Diastereomers
- C) constitutional isomers
- D) They are identical (the same molecule)

7. How many of the compounds in Figure 1 are called meso-compounds?

2 Both compounds A & B have a plane of symmetry & hence are meso-compounds they are achiral.