

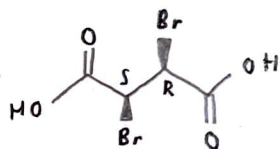
1.

- (3S, 4R, 6R, 7S)-4-chloro-6-fluoro-3,7-dimethylnonane
- (5S, 6R)-5-ethyl-6-iodo-2,2,7-trimethyloctane
- (3R, 5S)-3,5-dichloro-3-methylheptane
- (S)-2,3,5-trimethylhexane
- 6-bromomethyl-3-ethyldec-5-ene
- (R)-4-ethyl-1-methylcyclohexene

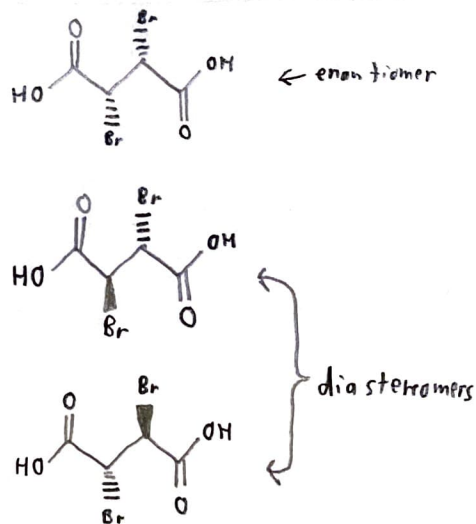
2.

- enantiomers
- enantiomers
- Constitutional isomers
- same
- constitutional isomers
- diastereomers
- same
- diastereomers

3.



Other stereoisomers:



None are meso compounds.

4.

Achiral

Chiral

Achiral

Chiral

Chiral

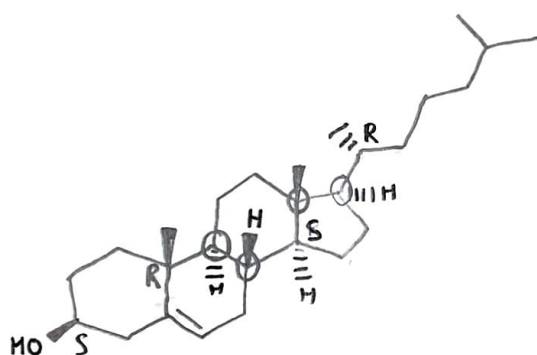
Achiral

Achiral

5.

a. S

b.

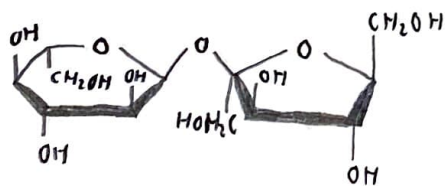


6.

a.  $\frac{60.1}{66.5} \times 100\% = 90.4\%$

b.  $0.904 = \frac{m-1}{m+1}$  ;  $m = 19.8$  ;  $19.8:1$

c.



(-)-sucrose

7.

No isomer

No isomer

(1 Z, 3 E)

E

E

Z

8.

3

4

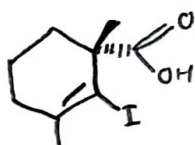
3

3

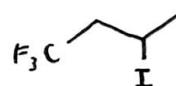
2

9.

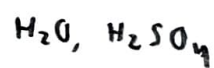
a.



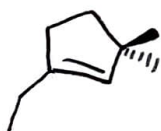
d.



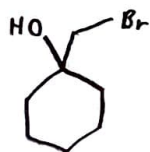
e.



b.



c.



f.



10.

