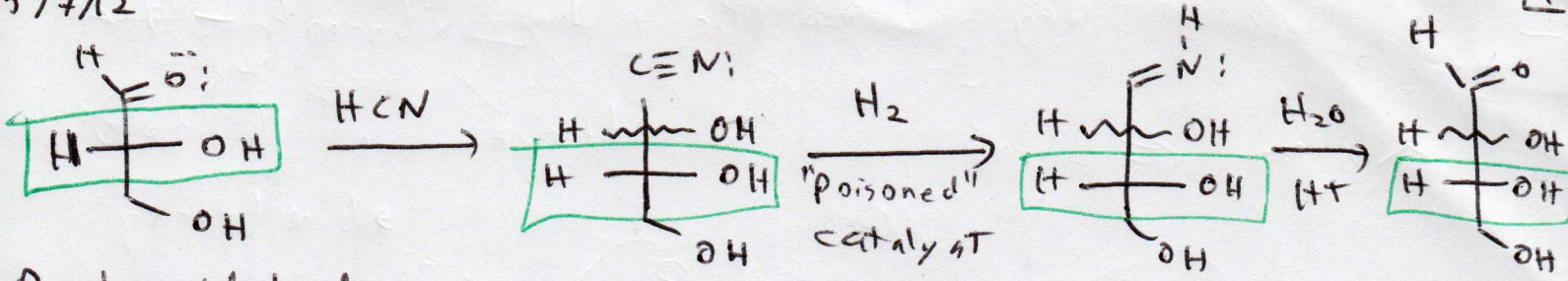
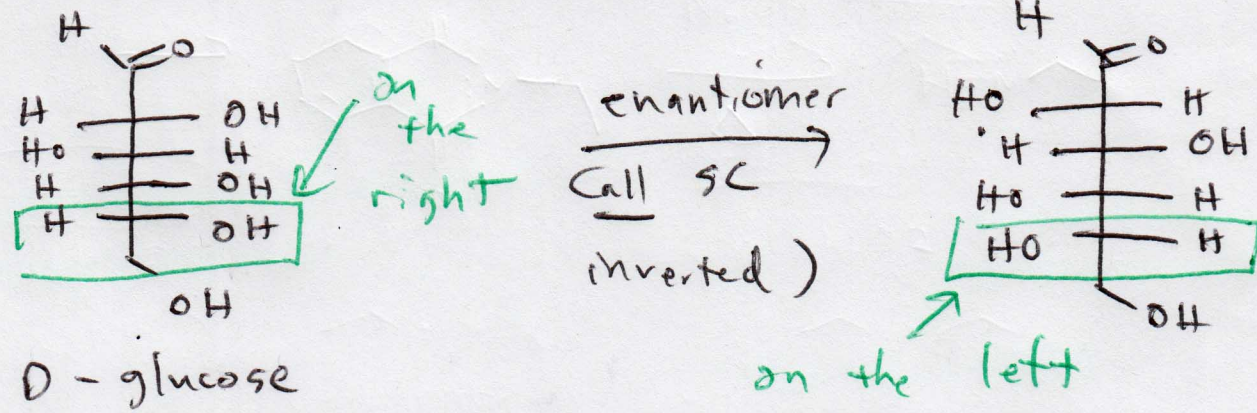


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D-glyceraldehyde

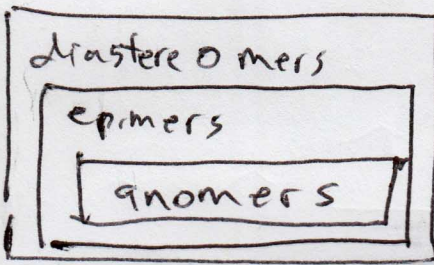
Carbohydrates are classified as D or L on the basis of the configuration of the stereocenter that is furthest from the anomeric position.



D-glucose

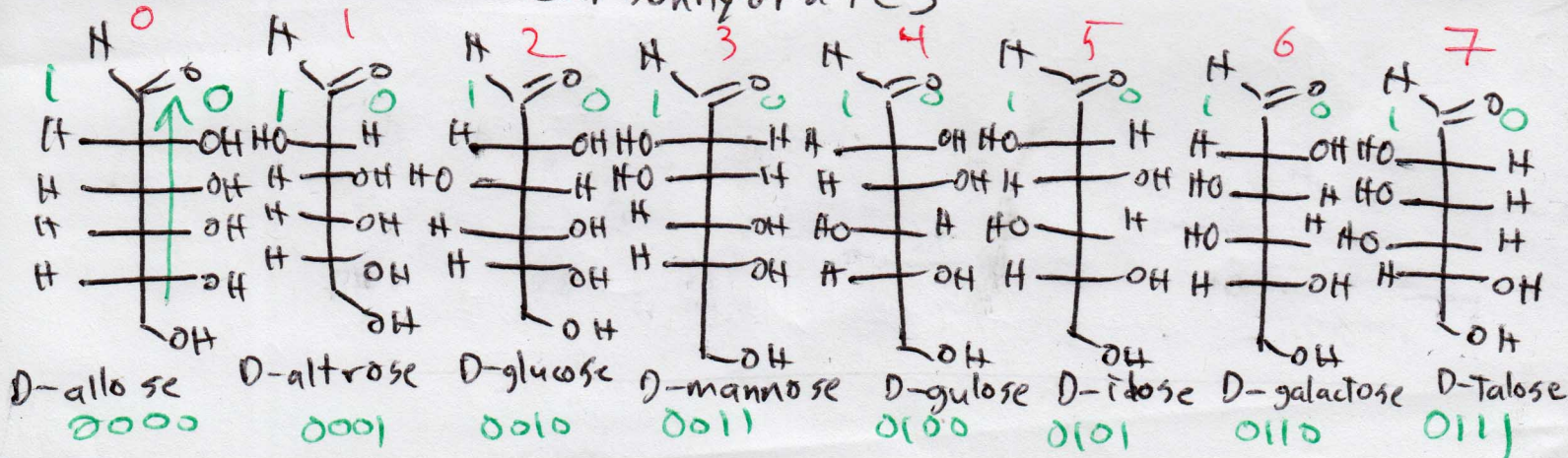
enantiomers — non-identical mirror-image stereoisomers  
 — all stereocenters are inverted

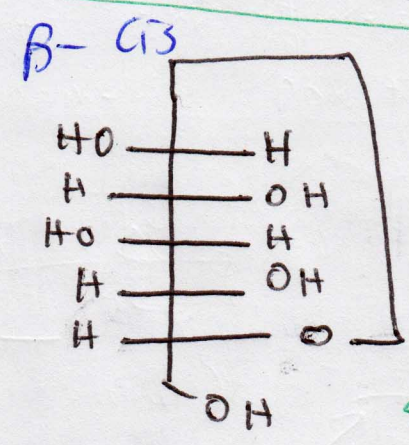
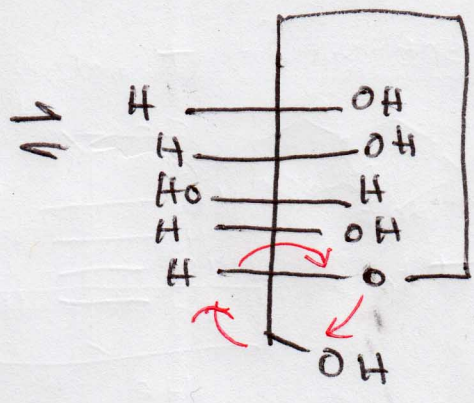
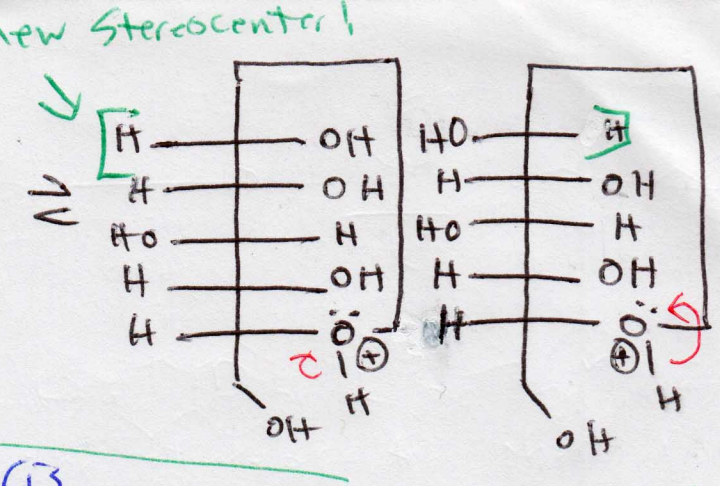
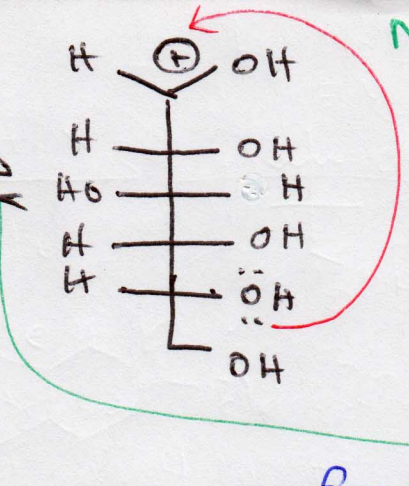
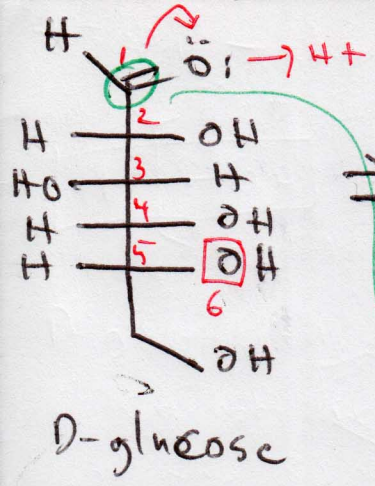
diastereomers — non-identical non-mirror-image stereoisomers  
 — some, not all, stereocenters inverted



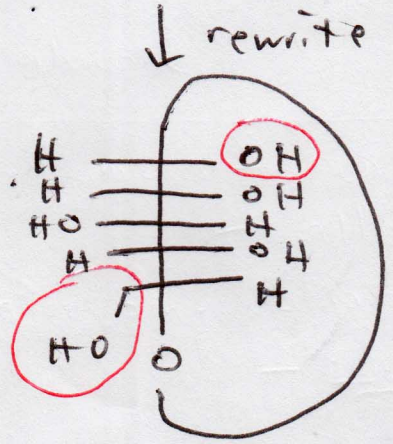
epimers — diastereomers that differ in the configuration of only one stereocenter.

anomers — epimers that only occur in carbohydrates

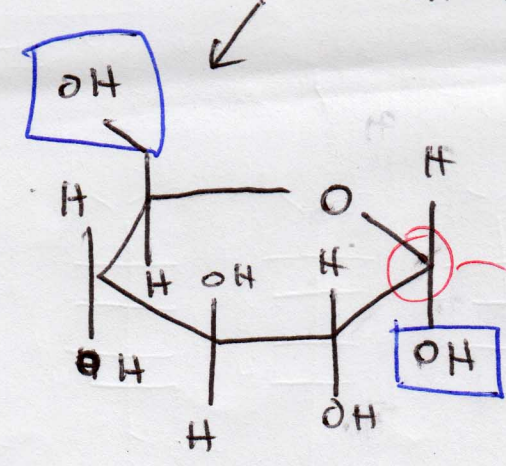
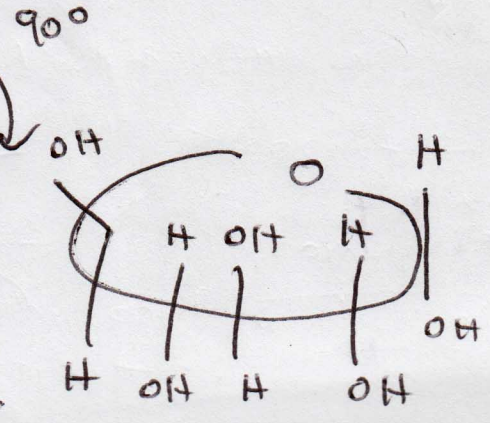




anomeric carbon /  
anomer position  
- in acyclic (linear)  
sugars, the carbonyl  
carbon is not a  
stereocenter; once  
cyclization occurs, that  
adopts a tetrahedral geometry,  
so it becomes a stereocenter



$\alpha$  - trans across the ring



Haworth  
projection  
anomer @  
right side

$\alpha$ -D-glucopyranose