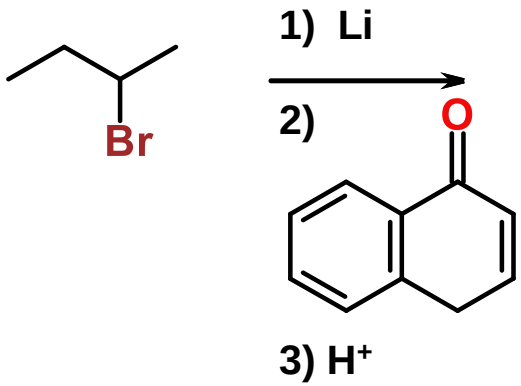
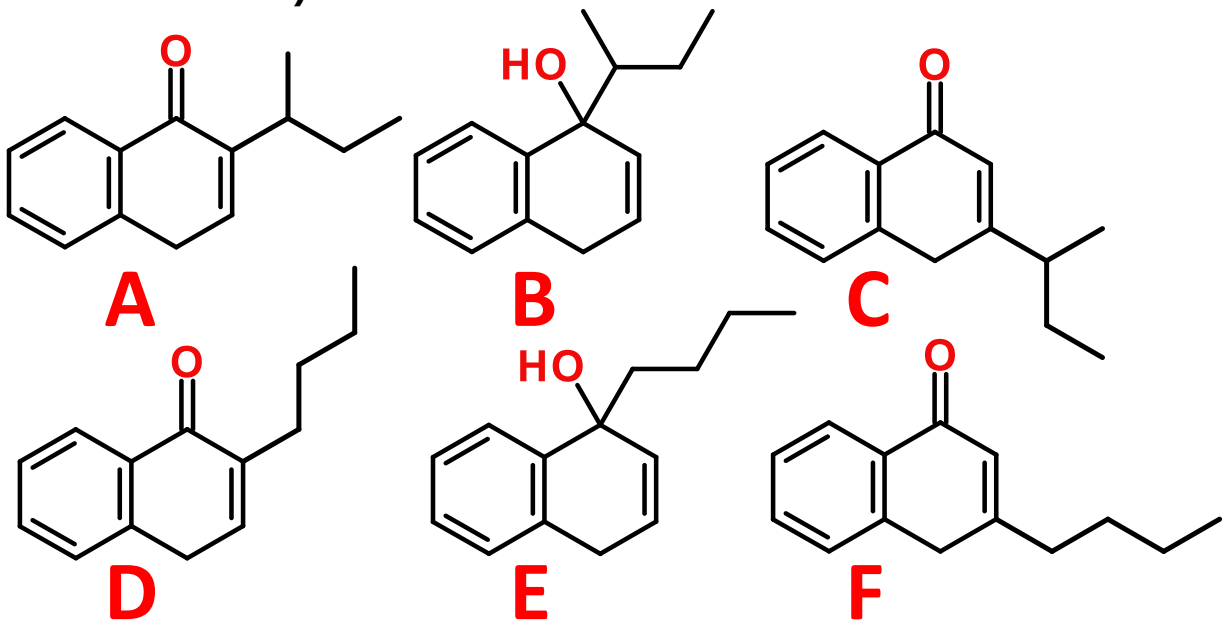
Give the major organic product(s) of the following reaction. Give your answer as a text answer, with the correct answers being listed in alphabetical order. (Example: xxxx a b)

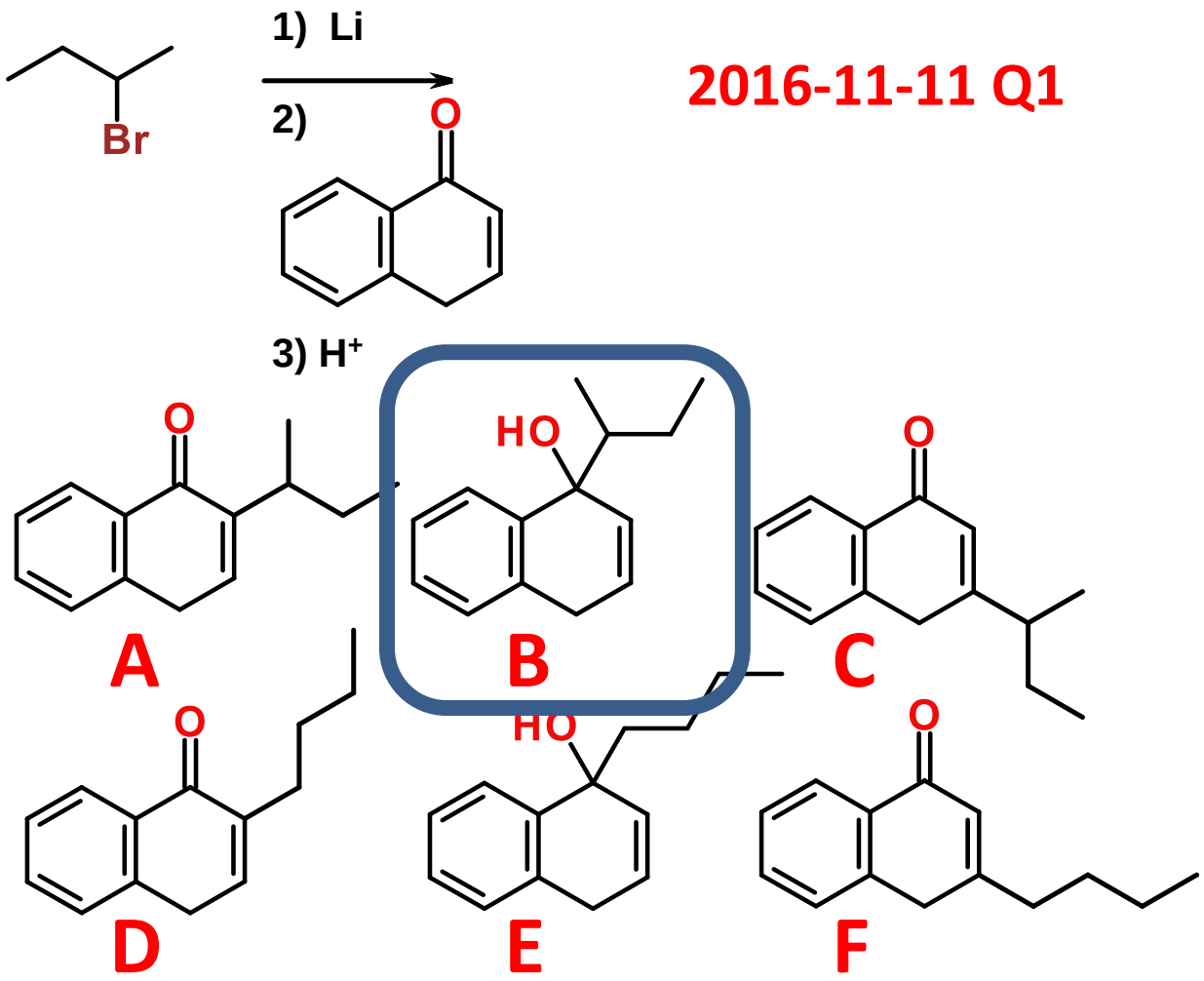


2016-11-11 Q1



G - None of these products are a major product of the reaction that is shown.

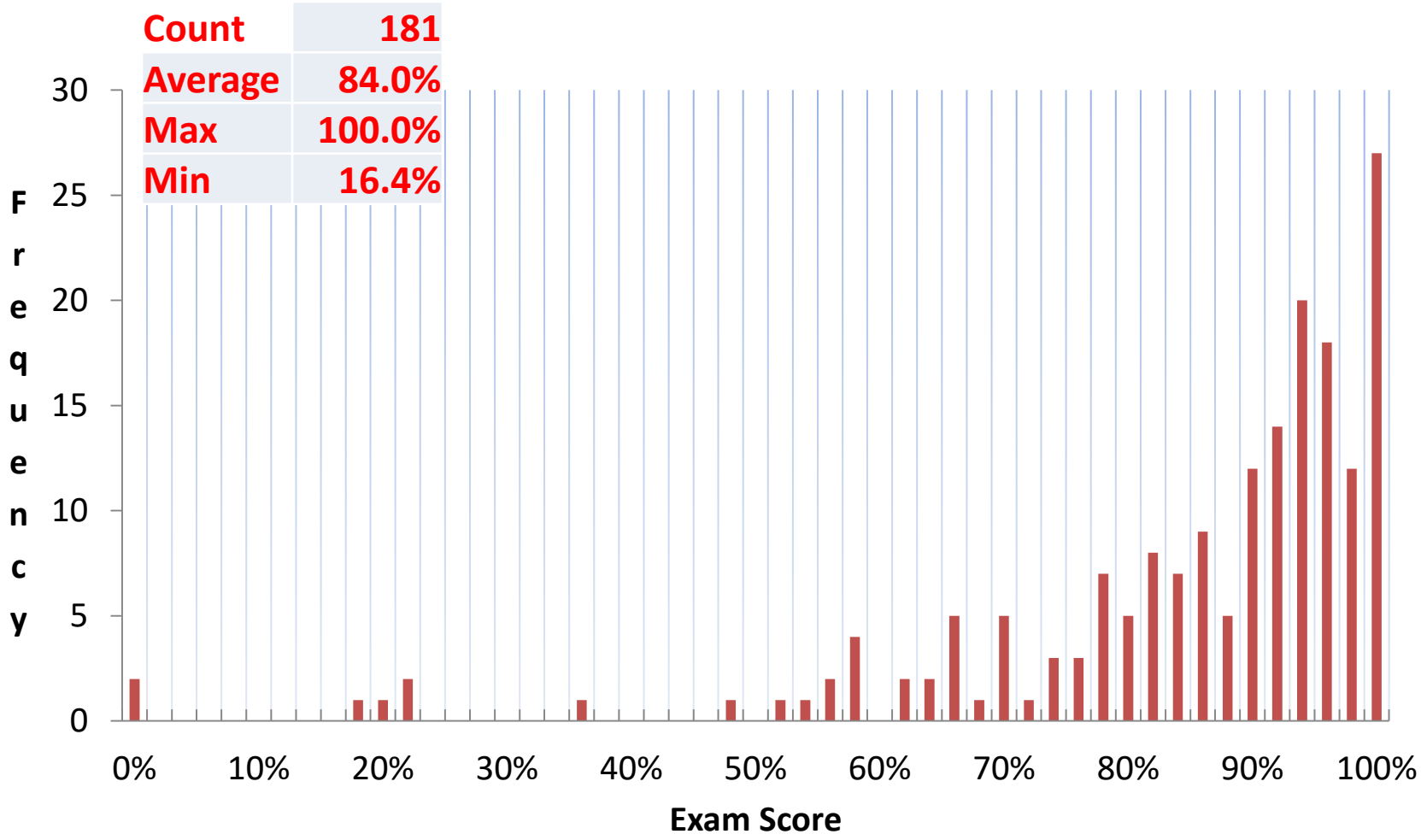
Give the major organic product(s) of the following reaction. Give your answer as a text answer, with the correct answers being listed in alphabetical order. (Example: xxxx a b)



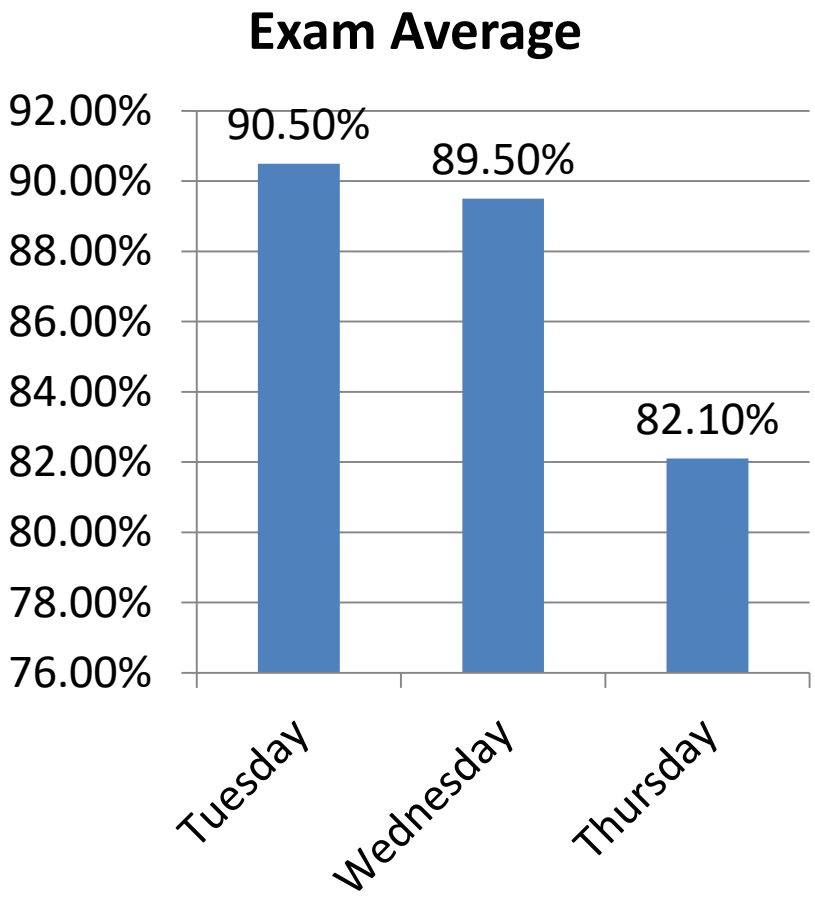
2016-11-11 Q1

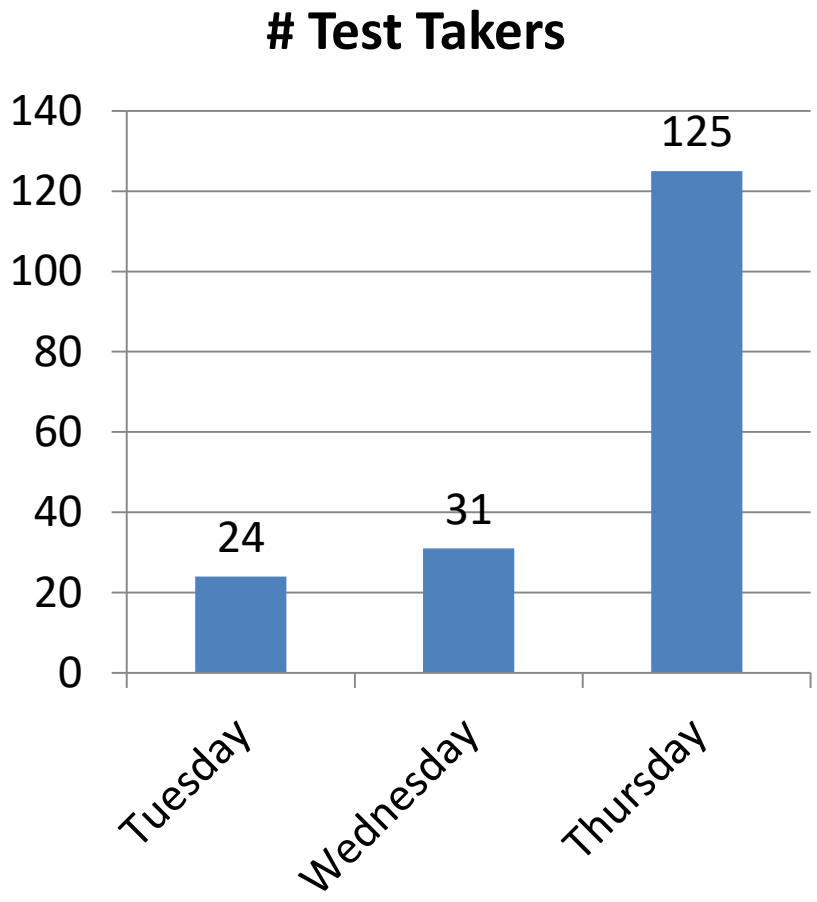
G - None of these products are a major product of the reaction that is shown.

Chem 234, Fall 2016 – Exam 3



Exam by Day


Exam Average
92.00%
90.00%
88.00%
86.00%
84.00%
82.00%
80.00%
78.00%
76.00%
90.50%
89.50%
82.10%
Tuesday
Wednesday
Thursday


Test Takers
140
120
100
80
60
40
20
0
24
31
125
Tuesday
Wednesday
Thursday

Exam 4 (Cumulative Exam)

- **Time:**
  - **Thursday, December 8: 2:00 – 4:00PM OR**
  - **Saturday, December 10: 10:00 am – Noon OR**
  - **Saturday, December 10: 1:00 – 4:00PM**
- **Location – Soc/Anthro Testing Center**
  - Chapters will be covered in this order: Chapter 18, 19, 20
- **Practice Exams are Posted**
  - Ex4-90A Practice Final Exam
  - Ex4-90B Practice Final Exam
- **Deadline for alternate arrangements is Monday, 12/5/2016 at 4:30 PM (i.e., close of business)**
  - **An oral make-up exam will be required for making up the exam for all students not taking the exam on the above dates or having already made prior arrangements**

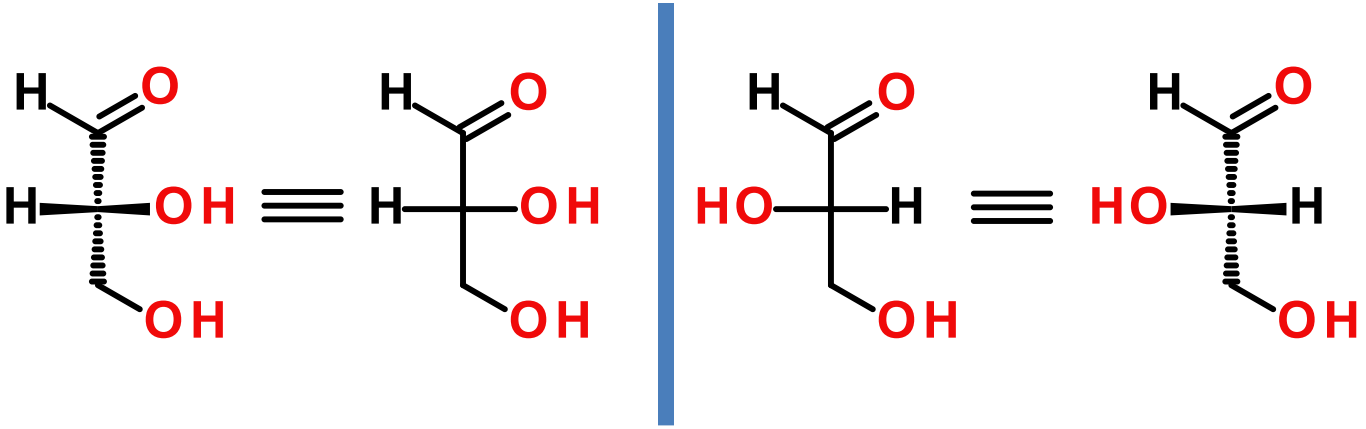
Assignment	Due Date
Ex4-01-B7-18-06B Claisen Condensation	Friday, November 11, 2016
Ex4-02-B7-18-06C Claisen Condensation	Saturday, November 12, 2016
Ex4-03-B7-18-08B A-B Unsaturated Rxns	Sunday, November 13, 2016
Ex4-04-B7-18-08C A-B Unsaturated Rxns	Monday, November 14, 2016
Ex4-05-B7-18-09A Carb Classification	Tuesday, November 15, 2016
Ex4-06-B7-19-01 Hemiacetal Formation	Wednesday, November 16, 2016
Ex4-07-B7-19-02 Carbohydrate Reactions	Thursday, November 17, 2016
Ex4-08-B7-19-02 Kiliani-Fischer Synthesis	Friday, November 18, 2016
Ex4-09-B7-19-03 Important Carbohydrates	Monday, November 28, 2016
Ex4-10-B7-19-04 Carbs in Blood Types	Monday, November 28, 2016
Thanksgiving Break	
Ex4-11-B7-20-01 Amino Acid Nomenclature	Tuesday, November 29, 2016
Ex4-12-B7-20-01B Amino Acid Naming	Wednesday, November 30, 2016
Ex4-13-B7-20-02 Amino Acid Acid Base	Thursday, December 1, 2016
Ex4-14-B7-20-03 Edmann Degradation	Friday, December 2, 2016
Ex4-15-B7-20-04 Merrified Peptide Synthesis	Saturday, December 3, 2016
Ex4-16-B7-20-05 Synthesis in Peptides	Sunday, December 4, 2016


HONORING ALL WHO SERVED
VETERANS
DAY

No Class Next Friday!!!

Carbohydrates

Simple Elemental Formula – $C_x(H_2O)_x$



D-glyceraldehyde

$C_3H_6O_3$
OR
$C_3(H_2O)_3$

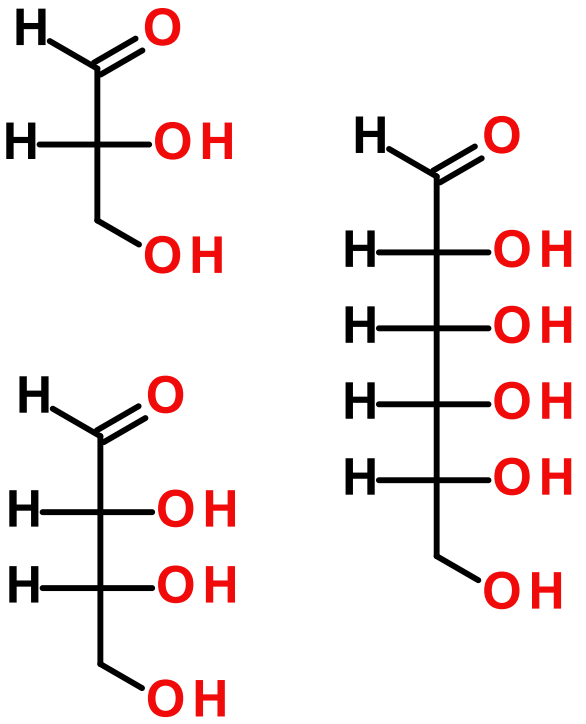
L-glyceraldehyde

Enantiomers – Stereoisomers which are not superimposable, but are mirror-image related

Aldoses *vs* Ketoses

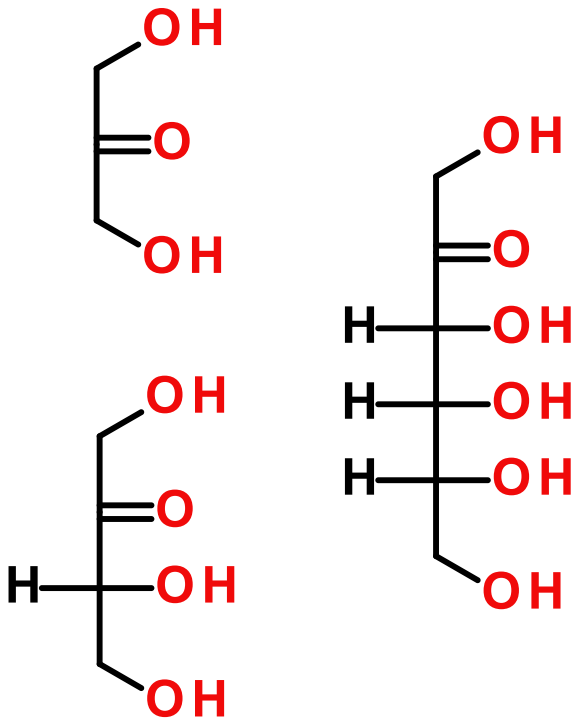
Aldoses

- Contain an aldehyde



Ketoses

- Contain a ketone

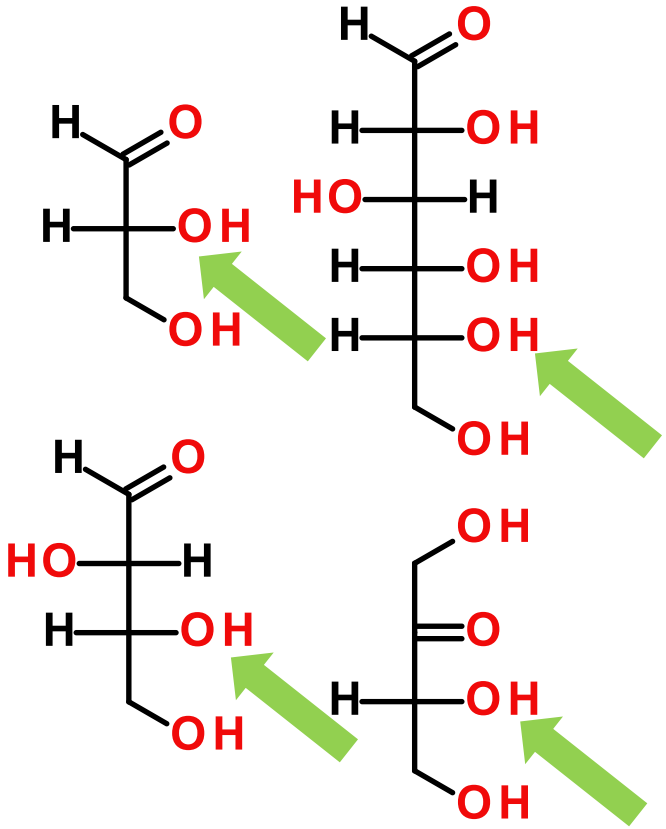


D-Saccharides *vs* L-Saccharides

Arrange so that most oxidized end of the molecule is at the top

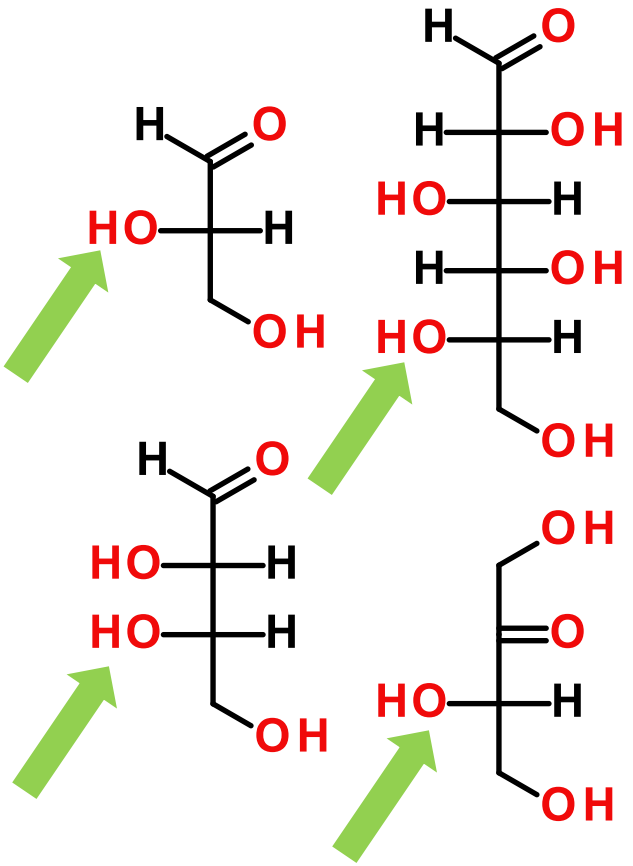
D-Saccharides

- Bottom-most OH to right



L-Saccharides

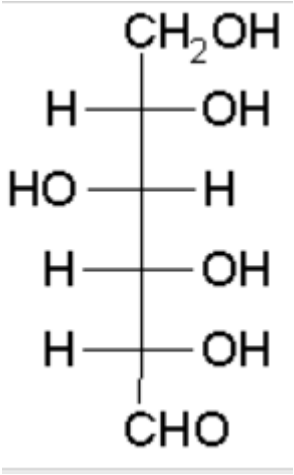
- Bottom-most OH to left



Classify the following carbohydrate as D- or L- and as an aldose or a ketose.

A. D-aldose
B. D-ketose
C. L-aldose
D. L-ketose

2016-11-11 Q2



Classify the following carbohydrate as D- or L- and as an aldose or a ketose.

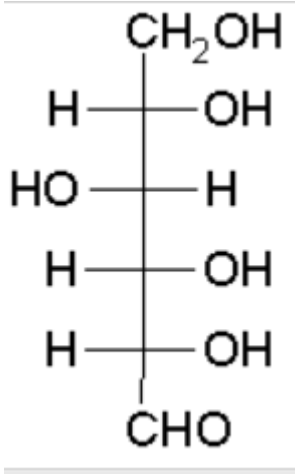
A. D-aldose

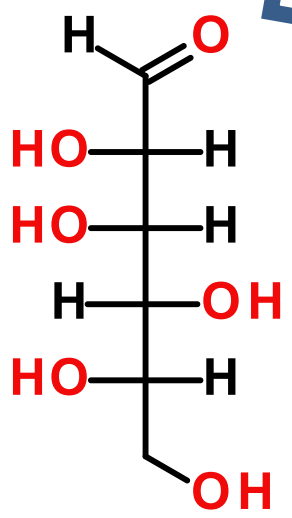
B. D-ketose

C. L-aldose

D. L-ketose

2016-11-11 Q2

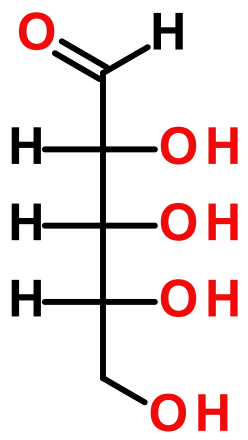




How many stereoisomers are there of an aldopentose? (Hint: Remember that the number of stereoisomers is 2^n, where n is the number of chiral centers). Give your answer as an integer number. **2016-11-11 Q3**

How many stereoisomers are there of an aldopentose? (Hint: Remember that the number of stereoisomers is 2^n, where n is the number of chiral centers). Give your answer as an integer number.

2016-11-11 Q3

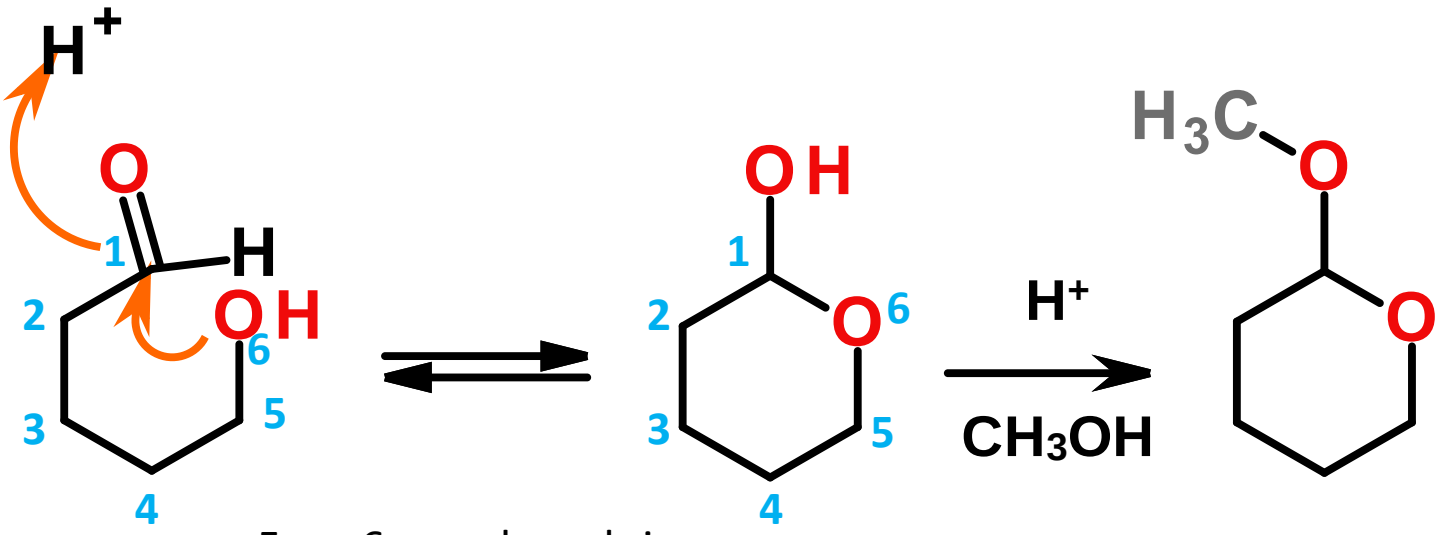


3 chiral centers

Number of stereoisomers = 2^3

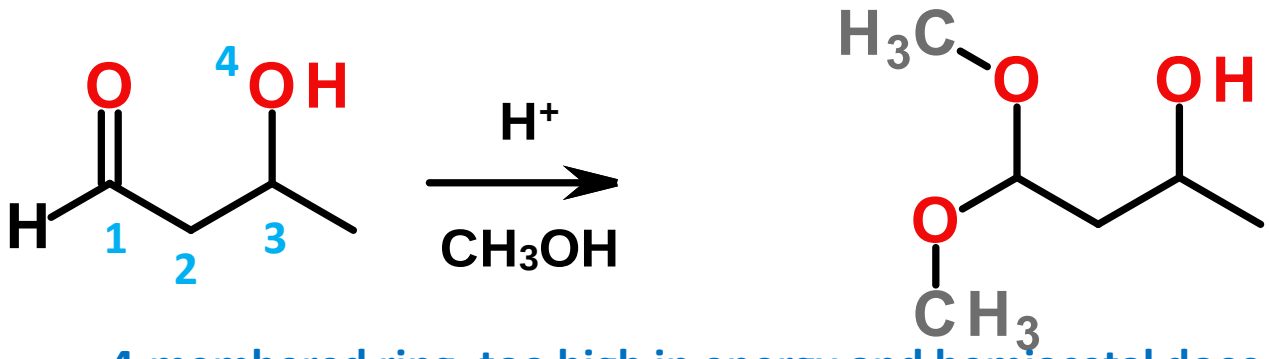
Number of stereoisomers = 8

Hemiacetal Formation

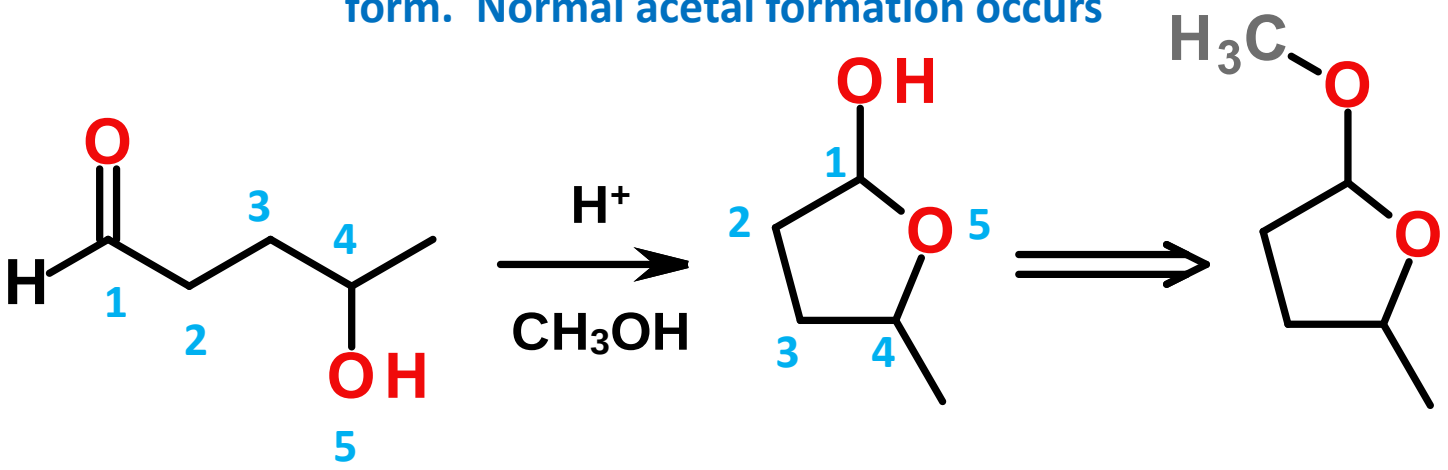


5- or 6-membered ring formation are good

Hemiacetal Formation



4-membered ring, too high in energy and hemiacetal does not form. Normal acetal formation occurs



5-membered ring is good for intramolecular hemiacetal formation.

Glucose Hemiacetal Formation From a Fischer Projection Perspective