

Name: _____ Date: _____

1. What is the difference between a ketose and an aldose? Why are sugars considered polyalcohols?
2. In detail, explain why monosaccharides are drawn in a ring structure. What is the reaction that causes the ring to form?
3. What is the relationship between dehydration reactions and hydration reactions in forming/decomposing disaccharides and polysaccharides? Describe one of the major polysaccharides in some detail (starch, glycogen or cellulose).
4. How do molecules like ATP and GTP store energy? Draw a simplified version of one of these molecules.

- (3 points) Glycolysis, Krebs's cycle and the electron transport chain are three important aspects of the production of chemical energy for cells. What is the major function of each of these steps (three separate answers)? What is the overall balanced equation for the breakdown of one molecule of glucose?
- (2 points) Describe muscle contraction and rigor mortis on a chemical level. Be sure to discuss ATP in your answer.
- Describe on of the major reactions of carbohydrates other than oxidation or hydrolysis. Be sure to include a balanced equation.