Carbohydrates

1. The carbohydrate monomers you have to learn, called _____saccharides , are _____ (a pentose sugar, important for RNA structure), _____ (from fruit) , _____ (a sugar in milk) and _____ for which there are two varieties, ____ - D and _____ - D, both of which you can draw here:

2. These _____saccharides can join through _____ reactions, which is a type of metabolism. These reactions _____ water, so are called _____ reactions. Write the three reactions you must know that form disaccharides:

3. When many monomers join, they form polymers. For carbohydrates, the polymers are called _____saccharides. There are several important ones to learn:

   a) Plants form _____, which is a polymer of ___ – D – glucose found in plant _____ walls. The molecules _____ their orientation, forming long _____ molecules that can link together by ___- bonds. Thus, this polymer has a lot of _____ strength.

   b) Plants also form _____ which is a polymer of ___ – D – glucose and is a component of what is commonly called starch. The glucose molecules form only _____ linkages, which then curl into a _____. This is also a result of ____- bonds between _____ molecules..

c) Lastly, plants also form _____ which is also a polymer of ___ – D – glucose and a component of starch. The glucose molecules form _____ and _____ linkages, which means this polymer has _____. It is much larger than _____.

d) Animals form _____ which is also a polymer of ___ – D – glucose and also forms _____ and _____ linkages, which means this polymer has _____ as well. However, it has more _____ than _____ which is one way to distinguish these two similar _____ saccharides.

Need a little help? Here are the words to fill in. Some appear more than once.

mono di glycogen cell condensation poly branched/branching amylopectin amylose 1,4 ribose 1,6 fructose galactose glucose anabolic release cellulose chain H tensile helix alternate

