**AP Biology Topic 1.3 – Introduction to Biological Molecules**

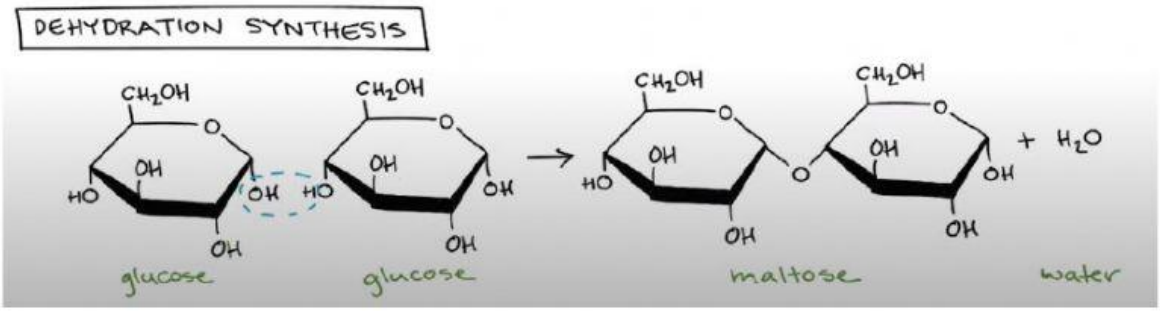
- Macromolecules are , constructed by the bonding of smaller molecules called

**Structure of Monomers and Polymers – Use the letter 'O' to make the structures below**

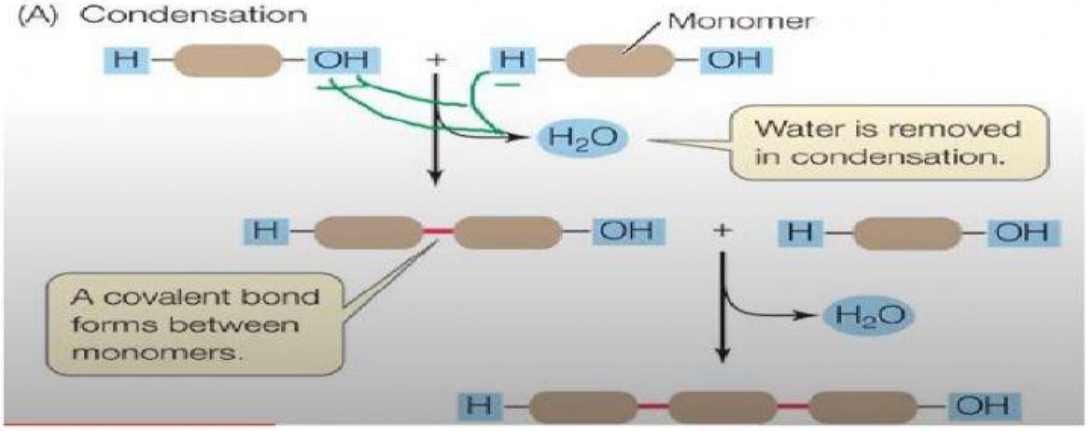
**Monomer draw picture is space below:** a is a small molecule

**Polymer draw picture in space below:** a is a long-chain molecule made up of a repeated pattern of

- Polymers are formed through reactions.
- Dehydration synthesis means " "
- It is also considered to be a since two molecules are condensed into one larger molecule with the loss of a smaller molecule ( )

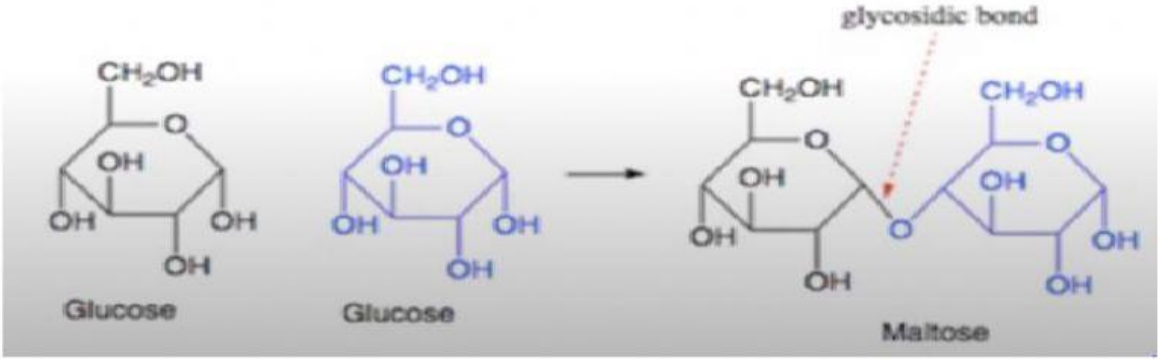



- **In a dehydration synthesis reaction, the of one monomer combines with the group of another , releasing a molecule of .**
- **The monomers share and form .**
- **As additional monomers join, this chain of repeating**

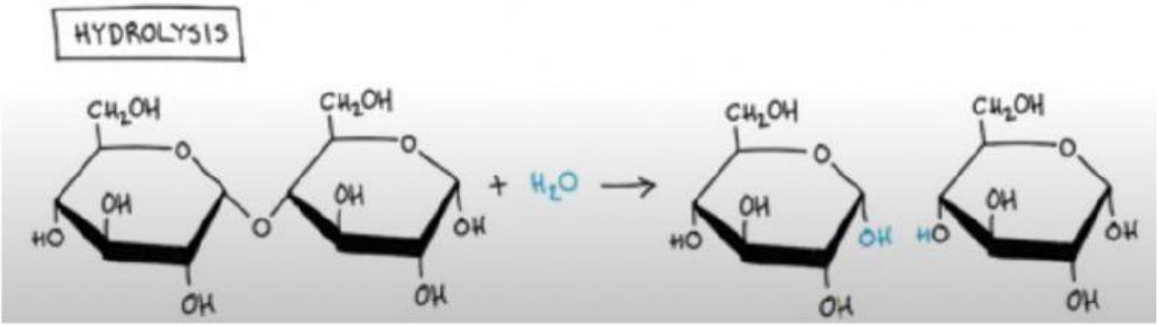


- Different types of are formed during synthesis in different macromolecules:

| Carbohydrate | Lipid | Protein | Nucleic Acid |
|---|---|---|---|
| | | | |




- Polymers are broken down through reactions.
- Hydrolysis means " "
- During these reactions, the is broken into two components: one part gains a and the other gains a from a water molecule.




- What is the first thing that happens during hydrolysis?
- What does this do to a covalent bond?
- Identify and explain the process we use to build monomers.
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