

Modeling Dehydration Synthesis

Name _____

Date _____ Hr _____

Consider the Dehydration Model constructed in class while answering the following questions.

- When the shaded squares were cut out, which elements were lost/removed? How many of each?
- What larger molecule is created when one monomer bonds to another _____
(use the appropriate biochemistry term for a 'two' unit molecule)?
- The Law of Conservation of Mass says that matter cannot be created or destroyed. Something had to be done with those elements you removed in question #1. What small molecule is formed from these 'leftover' elements?

- What larger molecule is created as monomers continue to bond to the growing molecule (use the appropriate biochemistry term for a 'many' unit molecule)? What small molecule is again formed from the 'leftover' elements described in question #1?
_____ and _____
- What is another name for dehydration synthesis?
(revisit Ch 3-1 to see what the owl book calls it) _____
- Describe how the name 'dehydration synthesis' is descriptive of the process that occurs when creating a polymer. Is the alternate/book name described in Question #5 as descriptive? EXPLAIN.
- What is the name of the reaction that is the opposite of dehydration synthesis? _____
- Describe how the two reactions compared in Question #7 relate to formation and digestion of the organic molecules studied in class.

Circle the appropriate terms to properly complete each statement:

During dehydration synthesis, (PROTEINS / AMINO ACIDS) are assembled into (PROTEINS / AMINO ACIDS).

During hydrolysis, (MONOSACCHARIDES / POLYSACCHARIDES) are digested into (MONOSACCHARIDES / POLYSACCHARIDES).

During dehydration synthesis, (NUCLEOTIDES / NUCLEIC ACIDS) are assembled into (NUCLEOTIDES / NUCLEIC ACIDS).

During hydrolysis, (FATTY ACIDS / LIPIDS) are digested into (FATTY ACIDS / LIPIDS).



