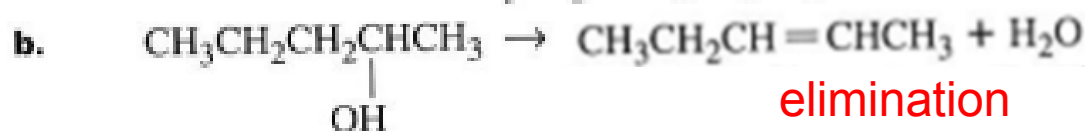
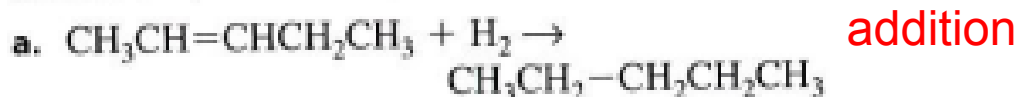


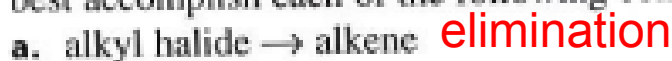


3.4 Assignment KEY

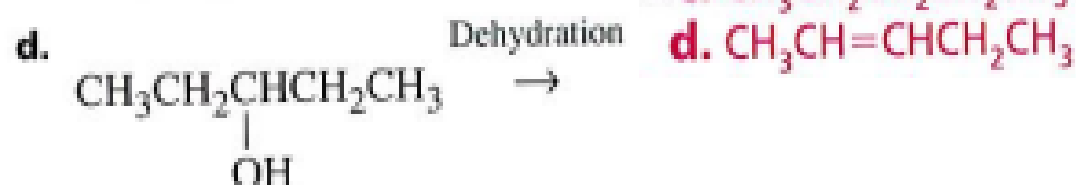
1. Classify each of the following reactions as either substitution, elimination, addition, or condensation.



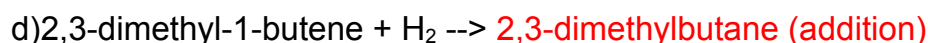
2. Identify the type of organic reaction that would best accomplish each of the following conversions.



3. Complete each of the following equations by writing the condensed structural formula for the product that is most likely to form.



4. Identify the type of organic reaction seen below then predict the product(s).



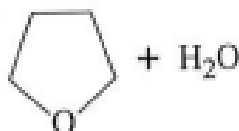


3.4 Assignment KEY Cont...

5. Explain why the hydration reaction involving 1-butene may yield two distinct products whereas the hydration of 2-butene yields only 1 product.

hydrating 1-butene may yield 1-butanol or 2-butanol because the OH group may bond to carbon 1 or 2 of the 4-carbon chain. hydrating 2-butene however, yields only 2-butanol

6. Explain the difference between an elimination reaction and a condensation reaction. Which type of reaction best is best represented by the following equation?



Elimination reaction-one organic molecule loses atoms or groups of atoms to form smaller molecules

Condensation reaction - two organic molecules combine to form a larger one

Therefore, this one is elimination

7. Functional groups give organic compounds distinct properties that may be used to identify the type of compound present. Suppose to examined the properties of several compounds and made the following observations:

Compound 1-liquid that has a pungent odour. It is miscible with water and the solution is a weak electrolyte.

Compound 2-is a liquid that has a strong aroma resembling apricots.

Using your observations, classify the functional group in each compound.

compound 1 - Carboxylic acid

compound 2 - ester