

1. Draw the structure of the alkene that would form 1,2-dibromo-3-methylbutane when reacted with bromine.

2. Draw the structure of the organic product made from the reaction between 2-bromobutane and ammonia.

3. Name and outline the mechanism for all three of the following reactions, and suggest one condition that would improve the yield of reaction 3.



4. 2-bromo-2-methylpentane is heated with potassium hydroxide dissolved in ethanol. Draw the mechanism for the formation of the two isomers that are formed in this reaction.

A small amount of another organic compound can be detected in the product of this reaction. Suggest a structure for this compound.

5. A substitution reaction occurs when 2-bromopropane reacts with aqueous sodium hydroxide. Name and outline the mechanism for this reaction, and give the name of the product formed.

Under different conditions, 2-bromopropane reacts with sodium hydroxide to produce propene. State the role of the sodium hydroxide in this reaction, and suggest one condition that would favour this reaction.

6. Iodoethane reacts with ammonia via a nucleophilic substitution reaction. Name and draw the structure of the product formed, and give a reason why this product is a nucleophile.

The product from this reaction can also react with iodoethane. Suggest a mechanism for this reaction.