Year 12 Science: Reactions of organic compounds

Name: _____ Date: _____

Try these without your notes first, then check the answer key.

Practice

1. Ethene with H_2 and a Pt catalyst: give the type of reaction and the organic product.

2. Chloroethane heated with KOH(aq): type and product?

3. Propan-2-ol heated with concentrated H_2SO_4: type and product?

4. Butan-1-ol heated with $Cr_2O_7^{2-}/H^+$: type and product?

5. Propene with HCl: type and major product?

Exam-style question: starting from 2-bromobutane

A chemist starts with 2-bromobutane, $CH_3CHBrCH_2CH_3$.

6. Classify 2-bromobutane as primary, secondary or tertiary, and give the reason.

7. Give the reagent and conditions that turn it into butan-2-ol, and the reaction type.

8. Heated with KOH(alc), 2-bromobutane gives two alkenes. Name both, say which is major, and justify your choice.

9. Describe how bromine water could tell the alkene products apart from 2-bromobutane.

Fix the mistake

10. Correct this statement: "1-Bromopropane heated with KOH gives propene."

11. Correct this statement: "In the major product, the Br adds to the carbon with more H atoms."

12. Correct this statement: "2-Methylpropan-2-ol turns acidified dichromate green."

13. Correct this statement: "Polypropene is drawn with a double bond in each repeating unit."