

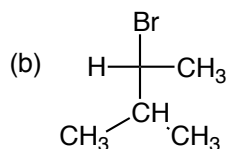
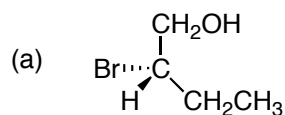
Name.....

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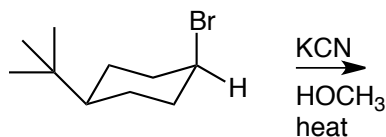
Chem. 121, Sect 012, Quiz 3

Fall, 2012, 50 points

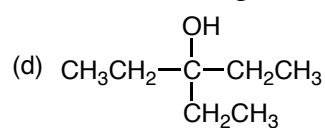
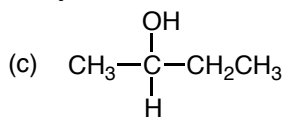
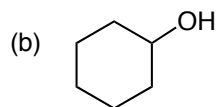
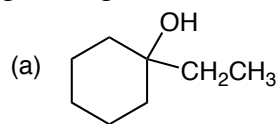
1. Assign the absolute configuration (R or S) to each of the chirality centers in the following molecules. (10 pts)



2. Give the product(s) formed in the following reaction. (10 pts)



3. For the following molecules indicate which would give a positive test with (a) potassium permanganate (b) KI/I₂ (iodoform test). There may be more than one correct answer. (10 pts)



4. In the preparation of 1-bromobutane from 1-butanol, aqueous sulfuric acid and sodium bromide (a) show the complete reaction and the complete reaction mechanism. (b) Explain the purpose of the gas-trap? (c) In the work-up, why did we wash the organic layer once with 80% sulfuric acid? (10 pts)

5. In the preparation of cyclohexanone from cyclohexanol using sodium hypochlorite (NaOCl, household bleach) and acetic acid (CH₃CO₂H) (a) show the overall reaction (no mechanism required). (b) In the work-up we added sodium bicarbonate (Na₂CO₃) to the initial distillate. Why did we do this? Show any reaction that may have occurred. (c) Why did we add the methylene chloride (CH₂Cl₂)? Explain briefly. (10 pts)