CONCEPT: ALCOHOL REACTIONS: OXIDATION REACTIONS

- The oxidizing agent of _____ dissolved in sulfuric acid reacts with an alcohol.
 - □ **Oxidizing Agent:** the compound used to _____ alcohols.
 - It adds as many _____ bonds as possible without breaking any C–C bonds.

EXAMPLE: Determine the product created under the following oxidation reaction.

$$\begin{array}{ccc} \text{CH}_3\text{CH}_2\text{CH}_2\text{OH} & \xrightarrow{\text{K}_2\text{Cr}_2\text{O}_7} \\ & & \xrightarrow{\text{H}_2\text{SO}_4} \end{array}$$

PRACTICE: Determine the product created under the following oxidation reaction.

$$\begin{array}{c} \text{OH} \\ \mid \\ \text{CH}_3\text{CH}_2\text{CHCH}_2\text{CH}_3 \end{array} \xrightarrow{ \text{K}_2\text{Cr}_2\text{O}_7 } \xrightarrow{\text{H}_2\text{SO}_4 }$$

PRACTICE: Which of the following alcohols cannot undergo an oxidation reaction?

a) 2-butanol

- b) 3-heptanol c) 2-methyl-2-propanol
- d) 1-propanol