Exam I Mon Oct 10 5:30 - 7 pm
Room Assignments
  A → Kong R1351; Konik → Sisco R1361;
  Skala → Ziltener B371
Sign up Wed. in class if you need to come to the late exam (Mon. Night)

Know the difference between an intermediate and a transition state.
- Intermediate should have all bonds drawn as solid lines
- Transition states have dashed lines to indicate bonds that are forming or breaking

1. Hg(OAc)_2, H_2O, THF
2. NaBH_4, NaOH

1. BH_3, THF
2. H_2O_2, NaOH

less substituted alcohol
most substituted alcohol

transition state for first step
How does the second step work?

\[
\text{H-O-O-H} \quad \leftrightarrow \quad \text{H-O-O}^\text{\textbullet} + \text{H}_2\text{O}
\]

Understand this mechanism, but you won't be asked to reproduce the entire mechanism.

Ozonolysis - Oxidative Cleavage of Alkenes

\[
\text{O}_3 \quad \text{O}_3 \quad \text{O}_3 \quad \text{O}_3
\]

O_3 - very reactive

\[
\text{H} \quad \begin{array}{c}
\text{O}_3, -78^\circ\text{C}, \text{CH}_2\text{Cl}_2 \\
1. \quad \text{O}_3, -78^\circ\text{C}, \text{CH}_2\text{Cl}_2
\end{array}
\]

\[
\text{H} \quad \text{CH}_3-\text{S}-\text{CH}_3 \\
2. \quad \text{CH}_3-\text{S}-\text{CH}_3
\quad \text{(reducing agent)}
\]

\[
\text{\textbullet} \quad + \quad \text{O} = \text{\textbullet} - \text{H}
\]

Ketone \quad \text{aldehyde}
Submit a Single-sided Copy to the Office
DO NOT STAPLE

\[
\text{\[\text{Diagram of chemical reactions}\]}\]

\[\text{\[\text{Diagram of chemical structures}\]}\]

\[\text{\[\text{Diagram of chemical structures}\]}\]